

The Citrus Industry

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Plans and Purposes of Florida State Horticultural Society

By L. B. Skinner, Dunedin, President

The Forty-First Annual Meeting of the Florida State Horticultural Society opens with the prospect of a very fruitful year ahead of us. We know that this does not necessarily mean a heavy crop, but we feel that it will mean that in this case—fruitful in the sense of a large crop of fruit, but also fruitful in the opportunity for greater usefulness on the part of the Society to the members and to the growers at large over the State.

Plans have been put forward by the press of the state for a greater Horticultural Society in the future. Whether this program will be consummated, I cannot say, but it may give us greater growth. We cannot all grow oranges of the fine texture of Wartmann Pineapple Oranges, but at least we can attempt to put a better class of fruit on the market.

I presume every grower is engaged in studying the plans and prospects of the Committee of Fifty in getting a growers' association organized, which will help us to control the flood of fruit that threatens our marketing program. And it will continue to be just that kind of a problem to us until we have solved it. The Fruitmen's Club has been wrestling with this matter for months and months, and still seems to be about as far from a solution of the matter as ever. We all agree that we want to have the problem solved for us, that we want to have the movement



L. B. Skinner, President

of shipments to market controlled.

At one moment one feels that the solution has been found, and in the next we find that we are up against a stone wall. Personally, I feel that we do not want to go ahead with any more mistakes—that we should do nothing until the whole matter has been carefully considered. I believe that the matter of selling fruit should have the O. K. of the men who have been so long on the job, and who presumably have gained a great deal

of wisdom by their experience, and that they should have a large part in the final plans adopted. Any other plan would seem to be fraught with the seeds of discord and failure.

But, however complicated the marketing problem is, and we know it is complicated, we feel that there is a field where great improvement can be made in the grade of our fruit. We feel that every effort should be made to improve the character of our soils, to the end that the fruit also may be improved. We want luxuriant foliage.

We are cursed with an endless variety of fruit of different kinds, and we are confronted with the problem of better the grade. I am not sure but that the solution of it lies in the inexhaustible beds of muck which we have close at hand. This should be treated and ground, composed with soft phosphate, ashes and stable manure, and should give us a wonderful dressing for our soils. With the proper kind of machinery this can be done at small cost, and should make an improvement which will show up at once in the quality of our fruit.

Crotalaria seems to have a wonderful effect on a soil where it is grown. As one very prominent grower expressed himself, it is equal to a top dressing of good manure. Velvet beans, beggar weed and cow peas are all a help. I have heard it said that heavy infestation of bugs will follow

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Increased Efficiency Needed in the Citrus Industry

By D. W. Hadsell, Orlando, Florida

I have been asked by your manager, Mr. Joe C. Jenkins, to speak in relation to possible improvement in the commercial Citrus industry. Mr. Walter F. Coachman, chairman of your committee, has told us that the principal objective of these Citrus hearings, is to benefit the grower by gathering information which may be used in his behalf. It is from this viewpoint,—the growers, and the student of Citriculture, that I speak.

The old economic law of Supply and Demand is universally acknowledged as sound. Demand determines price received. Supply regulates demand. Concerted action thru a state Clearing House, to furnish our supply of fruit to the consumer in an orderly manner, would increase the demand without unduly controlling the supply. It would neither increase nor decrease the available supply; it would only proportion the flow of our fruits to the markets in accordance with the consumption-power of the public. It is hardly conceivable that the good old law of Supply and Demand could be termed unconstitutional or outlawed by the courts as being detrimental in unduly regulating the price of our products. The movement toward cooperation and the pooling of valuable public information, thru such bodies as would join the Clearing House, is a sound policy. If the outflow from the Kimberly diamond mines were to be thrown upon the markets all at once, we would not want to wear diamonds. If our oranges were dispensed at the ratio mentioned by Jeff Sligh, a gallon at a time, we fear the initial results would be undesirable.

To sum it up, there must be an orderly method of marketing our state crop; efficiently devised, and universally supported, to safeguard the growers of this state in securing a fair price for their product. A well perfected Clearing House with a large representation of the state's growers and shippers, would have a powerful influence in increasing the efficiency of marketing, as well as of production. Growers in general could be educated up to better methods of production, and much investigational and experimental work could be financed and accomplished to the

The following address, considered one of the strongest presentations of the needs of Florida citrus growers, was made before the recent meeting of the Citrus Committee of the State Chamber of Commerce at Orlando. Mr. Hadsell is representative of the Mapes Formula and Peruvian Guano Co., and is a close student of citrus culture and the needs of citrus growers.—Editor.

lasting benefit of the industry. Education is the solution toward better production methods in Florida, as it is toward the betterment of most of the deplorable conditions of mankind.

Your committee asks the question: "Are the fertilizer companies giving any assistance toward bettering the status of the Florida grower"? It may be said that a very considerable attention is being given this subject today, by many of the leading fertilizer concerns of this state. These companies are employing specialists as advisors to the growers, specialists who are practically and scientifically qualified to direct the horticultural management of grove enterprises. Prominent national authorities on agriculture, such as Dr. Wheeler, head of the service department of the American Agricultural Chemical Co.; Mr. J. G. Grossenbacher of the Fico Fertilizer and Insecticide Company; Mr. C. H. Mapes, of the Mapes Formula & Peruvian Guano Co.; Mr. H. H. Hume of the Painter Fertilizer Company; these and many others are devoting serious attention toward improving the methods and means employed by Florida growers in the management of the citrus enterprise.

The Mapes Formula & Peruvian Guano Company with which I am connected, issue monthly a series of leaflets devoted to every phase of Citrus culture and management, endeavoring to present in an educational way, current and timely topics calculated to assist the grower. We have prepared a handbook on the control of insect pests and tree diseases, the data and photographs therein being approved and endorsed by representatives of the U. S. Department of Agriculture, and with these hand lens were supplied to carlot buyers with instruction for their use. The scientifically trained fertilizer specialist is perhaps even better fitted to advise growers, than some of the county agents, as the latter are necessarily compelled to be posted upon practically all branches of Florida

Agriculture, too big a subject for any but the most advanced technical experts of the country, to excel in.

Without definite figures at hand, I would estimate the average production per acre on bearing groves in this state, to be considerably below 100 boxes per acre. The average cost of production per box has been variously estimated to run from 70 cents to \$1.00. Mr. Sligh calls attention to a five year average cost of production on the Dolive grove in Orlando, amounting to about 50 cents per box. This is, however, not an average grove. It is one of the well run groves of this section. If the grower should average over a period of years, a price equivalent to \$1.50 per box "on the tree", he would make an average net profit of from 50 to 80 cents per box. Even allowing a net profit of \$1.00 per box, with an average of less than 100 boxes per acre, he would be making less than \$100 per acre annually from his investment. His bearing grove has an "asking" value of perhaps \$1000 per acre. Thus his return would be less than 10 percent annually, entirely too little considering the hazardous nature of his enterprise.

An industry is based upon the average conditions and results pertaining to it. Upon these facts are based the true-value of groves; the rate of new plantings; the destruction of old or unprofitable ones; the marketing and distribution plans of the Florida growers and shippers. When a grower's production falls below the average, or his costs run too high, he is financially compelled to change his methods or withdraw from the business.

We have reached a stage in the agricultural development of this country wherein extensive farming methods are no longer profitable. Intensive methods, scientifically planned, are necessary for the realization of a satisfactory labor income to farm operators. The Citrus grower must run his business in an efficient manner, today. If he has not the required knowledge he should employ someone who has, and avoid ignorant advice which is very freely offered.

The main trouble with the citrus industry in this state lies in the fact

that Nature is too kind to us. With no absolute knowledge of citrus culture we still get by. The progressive grower who is not satisfied to merely equal the average in results obtained, but who on the contrary wishes to profit on the investment of his money and brains, goes further and masters the fundamentals of scientific Citriculture. We need in Florida more of this sort of education, as well as demonstration of what it will accomplish. In the good old days the farmer did not have to be a business man. He raised his own food and made his own clothing. Later with the introduction of machinery to factory and farm, he required money, and thus had to sell and buy, as well as well as produce. Even more so today, the farmer must be an executive who can organize a farm as a successful business enterprise. Citrus failures today are more the result of poor business managerial ability than from the lack of available horticultural knowledge.

A good system of cost accounting applied on each grove, would, I believe, revolutionize the business of Citrus. Thru its study the grower would discover many ways of cutting unprofitable expense, and many means of increasing his labor income. He would learn more about the profitable use of fertilizer. He would cease striving to reduce his fertilizer application per acre. With indisputable cost and production data before him, he would soon see where it paid him to use more fertilizer per acre. He could determine what sources of tree food are most profitable, tho' probably higher priced per ton.

Excessive cultivation, a common present-day failing amongst Florida growers, would soon show up as undesirable, thru competitive tests, and a consequent saving in expense made as well as an improvement in fruit quality and tree health and productive power. The actual profit from efficient spraying as compared with check plots not sprayed, would be conclusive. The efficient usage of labor and machinery; the monetary value of location with respect to markets and side-tracks; the relative profit from large and small holdings; these and many other vital factors entering into the realization of the labor income, would be made evident.

The grower would thus educate himself in the business of Citrus farming, and would not long be the dupe of those who seek to inveigle him into the purchase of non-profitable service and materials. There is an urgent and vital need in Florida

for an active farm-management department in our state agricultural college, which should be engaged in making comprehensive farm-management surveys of counties, sections, and agricultural industries. The New York State Department of Agriculture, has done signally valuable work of this kind, and the bulletins and reports issued as the result of these surveys has been of incalculable assistance to farmers in the organization of their farm enterprises; in demonstrating the best system of agricultural management; the choice of soils, lands, equipment, and so on, as applied to any given crop, or environment.

The State Chamber of Commerce, desiring to help the farmers, and to gather facts and statistics to aid in this work, could promote no more worthy cause than that of securing and putting into effect a well-paid department of Farm Management in our state institution which would proceed vigorously along the lines above mentioned. The average Citrus grower is not a scientific grower; he is on the contrary, deplorably behind the times in the acquisition and practice of scientific knowledge of citrus culture. Thus we must educate and train him along the lines that lead to profit.

Practically every means and method effective in reducing the cost of production, is known and proven; yet the majority of growers practice these methods in a very haphazard manner. Most experienced growers know that a limited food supply only sustains the life of a tree, and that additional food produced more fruit and hence the profit in Citrus. He knows a light sand is a poor and infertile soil for a grove; that a humus-filled soil is usually a productive and profitable one; that excess or deficiency of soil moisture neutralizes the value of fertilizer applied and reduces the crop per acre.

Usually the greatest cost in Citrus growing, as well as the most profitable investment, is that of fertilization. A considerable investment in practically every other citrus improvement, is ill-timed and unprofitable unless proper attention is first given to liberal and efficient fertilization. There is probably not one grower in thousands who is using enough of the right kind of fertilizer. Many seem to think that with a stinted expenditure for fertilizer, accompanied by a moderate investment in each of the other cultural practices, a satisfactory return can be annually secured. This is a dangerous assumption and offers slim chances of commercial success.

The surest route to commercial Citrus success lies in growing a **QUALITY PRODUCT IN LARGE VOLUME AT A LOW COST OF PRODUCTION.** There is but one way to do it. The prime factor in its accomplishment is heavy, even very heavy fertilization with the very best **COMMERCIAL MANURES.** All other factors can follow along behind, and even if such factors as pruning, cultivation, etc., are somewhat neglected, good average profits may be secured over a term of years. Heavy and intelligent fertilization insures a heavy crop, which in turn means low overhead costs per box. A big crop is likely to be a quality crop (insect damage excepted), marketed at a preferential price. With low cost of production per box, the chances of poor profits are negligible unless freezes interfere.

There are growers who are perhaps averaging 150 to 250 boxes per acre from large bearing trees. Needless to say, they come under the head of poor feeders. Their costs of production will probably run from 70 cents to \$1.00 per box. There are also growers—heavy feeders—whose crops will run from 400 to 600 boxes per acre, and whose costs will run as low as 35 to 50 cents per box. A grower who can grow fruit for these low costs need never worry about poor net returns. If he is making from 400 to 600 boxes of fruit per acre (which only a few expert growers do) at such low costs on a grove investment of from \$1000 to \$1500 per acre, I have found that he is not one to try and save a few dollars per ton on his fertilizer, nor to neglect other scientific methods of crop production.

We hear many croakers today who spend their time in bemoaning the status of the Citrus industry, and acting the part of a condemned Citrus pessimist. These are frequently the misfits and failures. Actually there is a wonderful future and possibility in the business of citrus today, if it is undertaken scientifically and managed efficiently. There is a chance to increase the production of the average bearing groves, from 200 to 400 percent, above the results obtained on the average. There is good opportunity to raise a 10 percent return on the investment, to 20 or 30 percent annual return, and still not approach too closely the maximum possibilities which are being realized by expert and efficient operators. Special attention to the factors of **SOIL-MOISTURE CONTROL, HUM-**

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Corrected Program of Florida State Horticultural Society

Forty-First Annual Meeting to be Held in Winter Haven, April 10, 11, and 12 1928

By Bayard F. Floyd, Secretary

Special Events During Meeting

Florida State Rose Show in Parlors of Haven Hotel

Winter Haven Flower Show in Women's Civic League Building

Motor Trips as guests of Winter Haven Chamber of Commerce

Third Annual Meeting of the Florida Rose Show

Tuesday, April 10, 8:15 P. M.

Call to Order Pres. L. B. Skinner
Invocation

Music

Address of Welcome

Response for the Society

Music

President's Annual Address

Address — "Two Expeditions After Living Plants" Dr. David Fairchild, Washington, D. C.

Business Session—Report of Committees

Florida State Rose Show, Haven Hotel

Wednesday, April 11, 9:30 A. M.

Address — "Feeding Citrus from Viewpoint of the Tree" E. L. Lord Gainesville

Address—"Citrus on the Muck Lands" Frank Stirling, Davie

Address—"Some of the Things We Have Learned about the Growing of Grapes in Florida" Dr. Charles Demko, Altoona

Address—"The Efficiency of Winter Clean-Up for Citrus Aphids" W. L. Thompson, Lake Alfred

Address—"Crotalaria and Pumpkin Bugs" J. R. Watson, Gainesville

Address—"The Use of Oil Emulsions in the Citrus Grove" Dr. Gilman A. Drew, Eagle Lake

Wednesday, April 11, 2:00 P. M.

Address — "Florida Peat Investigations" Dr. R. V. Allison, Belle Glade

Address—"Remarks about Agriculture in the Everglades" Dr. H. P. Vannah, Belle Glade

Address — "Commercial Quality in Citrus Fruits" A. M. Tilden, Winter Haven

Address—"Some Factors Influencing Quality in Citrus Fruits" C. D. Kime, Orlando

Address—"The Shuck Worm as a Pecan Pest" Fred Walker, Monticello

Motor Trip to Lake Wales and Vicinity

Wednesday, April 11, 8:00 P. M.

Address—"Lawn and Golf Course Grass Problems" Charles R. Enlow, Gainesville

Address — "The Experiment Station and the Citrus Industry" Dr. Wilmon Newell, Gainesville

Address—"Ornamental Plantings in

W. L. Floyd, Gainesville

Address—"Rose Culture" N. A. Reasoner, Oneco

Thursday, April 12, 9:30 A. M.

PLANT PROTECTION SYMPOSIUM

Address—"Protecting Florida's Agriculture" Dr. Wilmon Newell, Plant Commissioner, Gainesville



✓ Bayard F. Floyd, Secretary

Reference to the Home" H. C. Handleman, Lake Wales

Address — "Home Demonstration Garden and Perennial Planting Program" Miss Isabelle Thursby, Tallahassee

Address—"The Use of Annuals in Beautifying the Home Grounds"

Address — "Changed Conditions in Reference to Plant Quarantine"

Dr. J. H. Montgomery, Quarantine Inspector, State Plant Board Gainesville

Address — "Alien Plant Pests Now Threatening Florida" L. R. Warn-

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American Fresh Fruit Export Increases

Exports of fresh fruit from the United States during 1927 were valued at \$60,000,000, approximately \$7,000,000 in excess of the value of fresh fruit exports during 1926 and practically double the value of the foreign shipments during 1923, according to Daniel J. Moriarity, Food-stuffs Division, Department of Commerce.

Increased exports of oranges and grapefruit account for most of the increase in value of the 1927 exports, the value of orange shipments being \$3,600,000 more than during 1926 while grapefruit exports increased by more than \$1,500,000.

Recent annual exports were: 1923, \$33,000,000; 1924, \$41,000,000; 1925, \$42,000,000; 1926, 53,000,000; 1927, \$60,000,000.

Apples constitute the principal fresh-fruit export of the United States, having a value of \$30,000,000 in 1927 while oranges came next with a value of \$15,000,000. Other exports and their value were: Pears, \$3,800,000; grapefruit, \$3,300,000; grapes, \$2,000,000; lemons, \$1,500,000; berries, \$1,100,000; peaches, \$777,000; pineapples, \$221,000; and "Other fresh fruits", \$1,900,000.

A comparison of 1927 exports of fresh fruits from the United States with those of 1926 shows an increase in the cases of oranges, grapefruit, berries, grapes, and peaches, and a decrease in the case of boxed apples and pears. Exports of barreled apples and lemons remained about the same.

Orange exports show an increase of 900,000 boxes; grapefruit, 350,000 boxes; grapes, 4,000 tons; berries, 2,300,000 pounds; and peaches, 69,000 bushels. Boxed-apple exports decreased by 500,000 boxes and pears by 241,000 boxes.

United States exports of boxed apples in 1927 amounted to 6,400,000 boxes (averaging 44 pounds) as against 6,900,000 boxes in 1926 an average yearly of 5,300,000 boxes in 1922 to 1926. Exports of barreled apples in 1927 amounted to 4,042,000 barrels (barrel approximating three boxes) as against 3,082,000 barrels in 1926 and average yearly exports of 1,700,000 barrels in 1922 to 1926. Combined, exports of boxed and barreled apples averaged 10 per

cent of commercial-apple production in 1922 to 1926.

Great Britain was the leading foreign market for American boxed apples in 1927, taking 3,100,000 boxes (48%) as against 3,350,000 boxes in 1926. Other important markets were Germany, Canada, Argentina, the Netherlands, Sweden, Denmark, Brazil, Norway, and the Philippines. In addition, Mexico, Cuba, Egypt, China, Finland, British Malaya, and Panama, took good quantities. Exports of boxed apples have a wider distribution than exports of barreled apples.

Germany, Argentina, Denmark, Norway, Egypt, Finland, and British Malaya took more boxed apples in 1927 than in 1926 while the United Kingdom, Canada, the Netherlands, Brazil, Mexico, Cuba, and China took less.

The more important smaller foreign markets for United States boxed apples in 1927 and their takings were: Venezuela, 13,700 boxes; Ceylon, 12,300; Peru, 12,300 Newfoundland and Labrador, 11,400; Belgium, 9,300; Salvador, 7,000; Guatemala, 6,800; Java and Madura, 6,700; Uruguay, 6,600; Costa Rica, 4,000; Colombia, 3,500; New Zealand, 3,000; Dominican Republic, 2,800; Honduras, 2,700; France, 2,400; Nicaragua, 2,400; Spain, 2,300; Bermuda, 2,300; Trinidad and Tobago, 1,000; "Other" British West Indies, 1,900; French Oceania, 1,700; Palestine, 1,500; Dutch West Indies, 1,200; and Chile, 1,000 boxes.

As in the case of boxed-apple exports, the United Kingdom was the leading foreign market for American barreled apples in 1927, taking 2,153,000 barrels as against 2,412,000 barrels in 1926. Other important foreign markets for barreled apples were Germany, Denmark, the Netherlands, Sweden, Argentina, Canada, Belgium, Norway, and Cuba. Germany, Denmark, the Netherlands, Sweden and Belgium took more barreled apples in 1927 than in 1926, while the United Kingdom, Argentina, Canada and Norway took less.

The more important smaller foreign markets for American barreled apples in 1927 and their takings were: Finland, 6,000 barrels; France, 3,500; Colombia, 2,800; Newfoundland and Labrador, 2,400; Brazil, 2,400; Bermudas, 2,200; Mexico, 2,

000; Venezuela, 1,900; Panama, 1,700; and Jamaica, 1,100.

The United States exported 3,600,000 boxes of oranges in 1927 as against 2,700,000 boxes in 1926 and 2,200,000 boxes a year in 1922 to 1926. Orange exports average over 6 per cent of production. Canada is our principal market for orange exports, taking 2,600,000 boxes in 1927 as against 2,300,000 boxes in 1926.

Feature of 1927 orange exports was the increased takings of the United Kingdom, took 600,000 boxes of our oranges as against 234,000 boxes in 1926 and from 31,000 to 115,000 boxes in 1923 to 1925.

Smaller foreign markets for United States oranges in 1927 and their takings were: China, 64,000 boxes; New Zealand, 55,000; the Philippines, 45,000; Cuba, 32,000; Germany, 28,000; Sweden, 17,000; Newfoundland and Labrador, 14,000; Australia, 10,000; British Malaya, 9,000; Bermuda, 7,000; Mexico, 6,000; and Japan, 5,000. Noticeable increases in imports in 1927 as compared with 1926 were: New Zealand, 43,000; Cuba, 29,000; and Germany, 24,000.

The United States exported 765,000 boxes of grapefruit in 1927 as against 411,000 boxes in 1926 and an average of 335,000 boxes a year in 1922 to 1926. Grapefruit exports average 4 per cent of production. Canada has been displaced as the leading market for United States exports of grapefruit by the United Kingdom, which took 421,000 boxes in 1927 as against 301,000 boxes to Canada. The following figures show British imports of United States grapefruit during recent years: 15,000 boxes in 1923, 48,000 in 1924, 141,000 in 1925, 158,000 in 1926, and 421,000 in 1927. Smaller foreign markets for grapefruit exports in 1927 and their takings were: Germany, 8,500 boxes; New Zealand, 4,500; France, 4,300; Sweden, 3,000; Australia, 2,500; Newfoundland and Labrador, 2,500; and Venezuela 2,200.

United States exports of lemons in 1927 amounted to 308,000 boxes as against 296,000 boxes in 1926 and an average of 208,000 boxes a year in 1922 to 1926. Lemon exports av-

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Fumigation of Citrus Trees In Palestine

By G. E. Bodkin, B. A., Dip. Agric. (Cantab), F. E. S. Government Entomologist, Palestine

Citrus Cultivation in Palestine

The cultivation of citrus trees in Palestine is by no means modern, for as far back as the tenth century A. D. the Arabs discovered the "bitter orange" in Northern India, and it was, in all probability, brought into this country shortly afterwards. Jacques de Vitry, who made a visit to Palestine in the 13th century, mentions several varieties of citrus.

The Arabic name for orange, "bertugan", indicates that this fruit was introduced into Palestine from Spain or Portugal. About the end of the 18th century cultivation was commenced on a fair scale at Jaffa, but warfare in 1776 and 1779 appears to have constituted a severe set-back, owing to widespread destruction of the groves.

In 1835 the Jaffa gardens are described by a reliable writer as the finest on the shores of the Mediterranean. Today Jaffa oranges are famous, but the gardens from which they originate cannot, on the whole, be said to be models of good cultivation, methods of tree planting or pruning.

According to Dr. Weinberg (2), the areas under citrus cultivation in Palestine amount approximately to some 7,500 acres. By far the greatest portion of this acreage is under oranges; tangerines, mandarin oranges and lemons occupy but a small percentage of the area. Practically all the fruit that is grown for export emanates from the Jaffa district and the Arab villages, and German and Jewish colonies in its vicinity. This concentration of fruit production about a port (Jaffa) is of considerable advantage from the point of view of transport costs and natural standardization of the product.

The average area of a Palestine orange garden varies from 7 to 14 acres; the largest garden in Palestine is close on 200 acres in extent and is situated at Baharia, some little distance from Jaffa. The number of trees planted to the acre is roughly between 250-260, and the average seasonal yield is about 220 boxes to the acre (an average Palestinian box of oranges contains 144 oranges). The average height of the trees varies from 10 to 14 feet; they are often very irregular in shape owing

to inordinately close planting.

The export of oranges from Jaffa has steadily increased since 1887 (when the first records became available), the only set-back experienced being during the war period (1914-1918), combined with a severe invasion of locusts in 1916. In the season 1887-1888, 100,515 boxes were exported; in 1913-1914, 910,548; in 1914-1915, 109,209; in 1923-1924, 1,584,081 boxes were exported at a value of 419,457 Egyptian pounds (\$2,100,000). The principal countries to which the fruit was exported during this season were, in order of importance, the United Kingdom, Egypt, Romania, Syria and France.

Since the war a slight increase in acreage has taken place due to some extent to the enhanced prices obtained for the fruit abroad (the result of superior methods of grading and packing) and the ever increasing local demand—the result of Palestine's steadily growing population. A sure sign of the times is the existence of an active co-operative orange-growers' association.

The cultivation of Palestinian citrus fruits, with some exceptions, leaves much room for improvement. The supplying of irrigation water at somewhat irregular intervals during some six months of the year (roughly speaking from May to October), a vigorous turning over of the soil with a plough or more usually by hand with a heavy broad mattock performed sometime in April or May, the application of animal manure and the removal of the more conspicuous dead branches, constitute, in many cases, the sum total of the items under the headings of cultivation. In many gardens vegetables are grown in convenient spots beneath the trees.

The care and maintenance of many of these orchards is usually left solely to a resident caretaker, while the real owner but seldom visits his property and is only interested in the collection of profits with the barest minimum of expenditure on cultivation and upkeep.

Abnormally close planting of the trees is a regular feature in many Palestinian orange groves, and it is by no means uncommon for the upper branches of the trees to inter-

lace to such an extent that the rays of the sun are shut out from the soil and foliage beneath. Such conditions are undoubtedly conducive to shade and coolness—so welcome during the hot summer months—but they by no means constitute good cultivation. In fact such features are apt to render the successful treatment of insect pests such as scale-insects an exceedingly difficult matter.

A fair percentage of gardens have been planted and are maintained according to up-to-date methods; larger yield of superior quality fruit are the inevitable result.

Scale-Insects of Citrus in Palestine

The following injurious Coccidae are found on citrus in Palestine:

1. The common Mealy Bug; *Pseudococcus citri*, Risso.
2. The Australian Fluted Scale; *Icerya purchasi*, Mask (The same as our cottony cushion scale) J. R. W.
3. The Soft Scale; *Lecanium hesperidum*, Linn.
4. The Mussel Scale; *Lepidosaphes beckii*, Newman. (The same as our Purple Scale) J. R. W.
5. The Florida Wax Scale; *Ceroplastes floridensis*, Comst.
6. The Chaff Scale; *Parlatoria oleae*, Colvée.
7. The Black Scale (the term "black scale" for *Shrysomphalus ficus*, Ashm., is entirely of Palestinian origin, and is used to distinguish this species from the red scale—*Chrysomphalus aurantii*, Mask. It is used in this sense throughout this paper) *Chrysomphalus ficus*, Ashm.
8. The Red Scale; *Chrysomphalus aurantii*, Mask. (The California Red Scale, not the Florida Red Scale) J. R. W.

Of these species only three can be said to be of any great economic importance—they are the red scale, the black scale and mussel scale. Of these three the black scale is by far of the greatest importance, and it is towards the elimination of this pest that fumigation by means of hydrocyanic-acid gas has been instituted. Evidence strongly supports the theory that *Chrysomphalus ficus*, Ashm., was first introduced into Palestine from Syria some fifteen years ago, and since then it has spread through those northern districts of Palestine which adjoin Syrian terri-

tory.

The penetration has been a sure and steady one, aided during the years of war by neglected cultivation and locust attacks, with consequent weakening of the trees and predisposition to infection. The famous Jaffa orange-growing districts are at present entirely free from this pest, but the threat of infestation is a serious one. Should these groves become infested, the valuable industry of orange exportation would, without doubt be adversely affected, as the previously described lax cultivation methods, close planting and consequent interlacing of branches, would render the manipulation of fumigation tents an extremely difficult procedure in the majority of gardens.

The opinion is sometimes expressed that the Jaffa orange is peculiarly resistant to attack by scale-insects, but the writer has seen the Jaffa type of orange growing in parts of Palestine other than the Jaffa district just as thickly incrustated by large colonies of the black scale as other varieties growing in close proximity. It has come under the observation of the writer, however, that during the summer months the trees in the Jaffa groves become coated a white, calcareous dust, which is distributed by traffic on the roads in the neighborhood; this may contribute to some extent to the general absence of scale-insects on the oranges grown in Jaffa. Somewhat similar effects have been observed in France in the case of grape vines, where the presence of a coating of road dust has resulted in the absence of disease, otherwise prevalent. (This is the reverse of conditions in Florida. With us trees along dusty roads are usually most severely infested) J. R. W.

The black scale, when present in the Palestinian orange grove, flourishes to an extraordinary extent. It is no uncommon spectacle to observe the golden yellow coloration of a ripe fruit to be almost totally obscured by the adhering, scab-like incrustations formed by the innumerable, overlapping colonies of the pest. The leaves may be similarly covered, but the insects are seldom, if ever, seen on the twigs and branches. Eucalyptus trees, which are often used as windbreaks, are liable to become heavily infested, and act as alternate hosts and re-infest the orchards after treatment by fumigation. Bananas and quite a large number of other plants are liable to infestation, but not in the same degree of severity.

The injury to infested trees is great: leaves drop off prematurely, the fruit becomes undersized and

unsightly, and the whole tree bears each year a smaller crop of fruit. Oranges infested with black scale fetch a low price on the market; the only alternative being to expend money on labor in removing the scale by hand prior to marketing. During the spring and early summer months it is hard to discover the presence of this Coccid in orange groves known to be heavily infested; this is due to the fact that the insects from the previous year's foliage—which dies off and drops from the trees on the coastlands during April—have not yet multiplied to any great extent on the fresh foliage.

From September to March the black scale is rampant. All species of citrus are equally liable to attack; but it is interesting to note that the bitter orange, used as stocks, is inclined to be resistant to this pest.

The red scale is found all over Palestine but seldom causes any widespread damage. It is found thruout the Jaffa area, but cannot be said to rank as a pest of any great economic importance there. Lemon trees appear to be peculiarly liable to pernicious attacks by the red scale.

The mussel scale was first recorded from one garden in the Jaffa District by Gough (3) in 1921. Since that time it has spread to several adjoining groves and is gradually assuming an economic importance. It is proposed to treat the affected areas by means of fumigation during 1925.

Fumigation Methods and Results

Fumigation of citrus trees in Palestine was inaugurated on a correct scientific basis by the writer early in 1923. As this work, from its inception, has been of a pioneer nature an account is given here of the modifications in and additions to the accepted methods found necessary in order to meet peculiar local conditions. It is hoped that such details may prove of some value to workers who may find themselves in the future faced with problems of a similar nature.

The canvas tents used for covering the trees during fumigation have been of the conventional octagonal shape measuring 40 feet across and marked by means of quick-drying paint, locally compounded. This marking of the tents has been executed according to the method established by A. W. Merrill (4). At present only the one size has been utilized, as it has proved the most convenient for the Palestinian trees. Up to the present these tents have been manufactured by firms in Cairo, Egypt, who have had previous experience in such work for the Egyptian

Ministry of Agriculture.

These tents have adequate gas-retaining properties and will stand the somewhat rough conditions of usage imposed by local conditions. Mildew-proofing compounds have not, up to the present, been found necessary. An experiment is at present in hand whereby these tents will be woven and constructed by convict labor at the sole cost of the cotton utilized.

The poles used for manipulating the tents are of the usual size and their use has been quickly appreciated and learned by the local laborers. Tent poles from old army stock have proved very satisfactory.

After trials of a large number of locally-made earthenware pots of varying shapes and sizes for gas generating purposes, preference has been given to a black earthenware kind manufactured at Gaza in Southern Palestine. In height they are 22 inches, with a diameter of 5½ inches at the mouth and 12 inches at the broadest portion. They have the advantage of being exceedingly cheap, not easily broken, portable and readily procurable. A good percentage will retain their acid-resisting properties thruout one season. Special metal covers have been designed for use with these jars. The supplies of sodium cyanide and acid have been procured from the United Kingdom; the only difficulty experienced has been in obtaining the cyanide packed in large tins and broken up to a size which will easily pass into the mouth of the generators. The waste and expense of labor employed in opening and emptying a number of small tins of cyanide and in breaking up the chemical to a suitable size is considerable.

The dosage schedule employed has been in invariable accordance with the No. 1 schedule (100 percent) as drawn up by the United States Department of Agriculture. (5)

Experience in fumigation work gained up to the present in Palestine indicates that it is only possible to carry out this operation during certain months of the year. During the winter months—which may, strictly speaking, be said to commence in November and end with February—the frequent occurrence of high winds and heavy rain hinders regular execution of the work to such an extent as to make it an impracticable proposition. During March and April the trees drop their last year's foliage, blossom and put forth their new foliage; fumigation, therefore, cannot be performed during this period without serious risk of severe

Continued on page 30

The Citrus Industry

with which is merged The Citrus Leaf

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Telephone _____ 4819

S. L. FRISBIE, Editor and Manager

FRANK KAY ANDERSON _____ Assistant Manager

A. G. MANN _____ Production Manager

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GROVE CALENDAR FOR APRIL

Timely Suggestions For Grove Work During the Present Month

Keep the Acme harrow going every week or ten days in the citrus grove; frequent cultivation checks loss of moisture required by young fruit.

Trim nursery stock preparatory to budding; start budding if stock is ready.

Spray to control melanose and scab of citrus with 3-3-50 bordeaux-oil emulsion (1 percent oil); apply spray ten days after petals fall.

Pick up and destroy wormy peach drops and lesson later damage from curiulio (wormy peaches).

Spray or dust pecans with lead arsenate, as the leaves come out, for case borers and bud worms.

THE PENNEY PLAN

The latest contribution to the many suggestions made during the past year looking to the betterment of general conditions in the citrus industry of Florida is that known as the "Penney Plan." This plan was outlined at a meeting in Jacksonville on March 30, when Mr. Pen-

ney of the Penney Stores and the Penney Farms submitted to the State Chamber of Commerce a proposal to head a movement for the improvement of citrus conditions, provided certain conditions laid down in his proposal were accepted by other factors in the industry.

Most prominent of these conditions was one providing that a second co-operative citrus marketing agency should be formed with Dr. Burdette G. Lewis, vice-president of Penney Farms, as general manager.

Other conditions submitted by Mr. Penney as preliminary to his acceptance of the presidency, were that growers should pool their orders for fertilizers, spraying materials and other grove supplies through a supply corporation with Dr. Lewis as head; a credit corporation organized to serve the growers under the direction of Dr. Lewis; an arrangement with the railroads whereby mixed cars of citrus and vegetables might be shipped to smaller markets where complete cars of citrus or vegetables could not be profitably handled; that the Committee of Fifty confine its activities to problems of growing, advertising and disseminating clearing house information among members, and that the proposed new marketing agency and the Florida Citrus Exchange be given proper representation on the board of directors and any advisory committees of the organization being perfected by the Committee of Fifty.

While it is too early to accurately gauge the grower reaction to the Penney proposals, it seems evident that the suggestions have not met with overwhelming approval, while it is even more evident that in some grower circles the proposition has met with open hostility, although Walter Coachman, chairman of the citrus committee of the State Chamber of Commerce and Dr. Lewis, another member of that committee, have given it their approval.

Many members of the Florida Citrus Exchange feel, and express the feeling, that there is no need of another co-operative marketing agency, and that their own organization is entitled to the undivided support of those growers who favor co-operative methods. These growers declare that the present co-operative organization provides everything which it is proposed to incorporate into the new one.

Then, too, it is pointed out, that the proposal of Mr. Penney injects a new note into the symphony of suggestions which have been submitted for the approval of growers. Heretofore, every suggestion made in regard to marketing conditions has been predicted upon the thought that there are already too many marketing organizations. Each plan submitted heretofore as to marketing has, either directly or by implication, sought to reduce the number of such agencies by co-ordination through elimination or elimination through co-ordination. Mr. Penney's plan is the first to suggest an increase in such organizations. While strong for co-ordination, Mr. Penney seeks to achieve it by adding to, rather than subtracting from, the number of marketing organizations. This constitutes probably the greatest single objection to the plan offered.

*1. Citrus fruit industry & trade.
2. Citrus fruit industry & trade.
Penney Plan*

Judge Allen Walker, head of the Committee of Fifty, is quoted in the public prints as being opposed to the plan suggested by Mr. Penney. He declares that it is the purpose of the Committee to perfect the organization along the lines originally mapped out, with the thought of co-ordinating the efforts of agencies already established and with no thought of aiding in the creation of new agencies.

Perhaps the greatest obstacle in the way of its acceptance at this time lies in the fact that citrus sentiment seems to have crystalized behind the activities of the Committee of Fifty. Growers and business interests are inclined to stand by that committee until its labors have been completed and its final plans are announced, in the confident belief that this organization holds forth the greatest promise of betterment in conditions confronting the industry.

FLORIDA HORTICULTURAL MEETING

Within the next week the Forty-First Annual Meeting of the Florida State Horticultural Society will be held. The meeting this year is to be at Winter Haven on April 10, 11 and 12.

In preparation for this meeting, President L. B. Skinner, Secretary Bayard F. Floyd, Treasurer N. A. Reasoner and Assistant Secretary W. W. Yothers, have been tireless in their efforts to put on the best program ever given at a similar gathering, and otherwise to assure the success of the meeting.

With the meeting held right in the heart of Florida's greatest citrus producing section, and with interest in all matters pertaining to citrus culture and citrus problems at its height, it is probable that the meeting this year will bring together a record breaking attendance and that the gathering will excell all previous meetings in interest and discussion.

No grower of citrus or any one with other horticultural interests can afford to miss this meeting.

ENTER POLITICS

Citrus growers will be interested in the announcement that Frank Kay Anderson of Altamonte Springs is a candidate for railroad commissioner in the June primaries.

For many years Mr. Anderson has been connected in an intimate way with the citrus interests of the state and is well known also for his connection with newspapers and other publications.

Mr. Anderson is thoroughly conversant with the duties of the office of railroad commissioner and is well versed in the intricacies of railroad rates and the needs of growers and shippers.

Now it seems we may look forward with some assurance to the successful establishment of citrus clearing house.

One of the most important items in any citrus grower's program at this time of year, is the resolution that he will leave no stone unturned to grow a crop of quality fruit this season.

"Please Say You Saw It In The Citrus Industry"



The Lyons Fertilizer Company

takes pleasure in endorsing the efforts of Florida citrus growers to organize themselves for the purpose of improving marketing conditions and raising the standard of the quality of their fruit.

We gladly offer the cooperation and assistance of the entire personnel of this organization for the accomplishment of this purpose.

C. W. Lyons,
President.

Lyons Fertilizer Company

Tampa, Florida

"Quality Fertilizer for Quality Fruit"

THE COMMITTEE OF FIFTY

Work of organizing the citrus growers of Florida through the efforts of the Committee of Fifty has made rapid progress during the past month. Preliminary plans have been well worked out and progress toward final organization is being made.

At a meeting with federal agents at Winter Haven some weeks ago, and a second meeting at Eustis on April 3, plans for a growers' clearing house under the operation of the Capper-Volstead bill were worked out to the general satisfaction of the committee. As finally agreed upon, it is believed that a workable plan has been evolved which will meet with the approval of a majority of the growers of the state.

This clearing house plan and other details of the perfected organization will be presented to the growers at a mass meeting to be held in Orlando on April 18, at which time it is believed that plans will be accepted and the organization formally launched.

Then must follow the signing up of individual growers and the launching of the organization as an effective body for the betterment of production, control of distribution, advertising and standardization of grade and pack.

In its deliberations, the Committee of Fifty has had the co-operation and support of many business and financial interests. Fertilizer, insecticide and supply concerns have contributed liberally to the support of the movement in a financial way. Among bankers, J. A. Griffin, president of the Exchange National Bank of Tampa, has been an active worker and a liberal contributor to the organization fund.

It is estimated that \$25,000 will be needed to finally put the organization in working order, and present contributions to the fund seem to indicate that little difficulty will be experienced in raising this fund. Already a very substantial amount has been contributed. No contributions are being accepted from any marketing agency, either co-operative or independent, the idea being to keep the proposed organization entirely free of obligation in such quarters.

Of the numerous plans suggested for benefiting the industry, that of the Committee of Fifty seems to have met with much greater support and confidence from the growers, marketing agencies, allied industries and the public in general, than any of the others. Present indications point to the successful culmination of these plans at the mass meeting in Orlando on April 18.

A liberal and timely application of insecticides will help to produce a quality crop of good appearance—the kind which spells profit to the grower and enhances his credit at the bank.

Getting the trees properly started in the spring is one of the essentials of an abundant crop of quality fruit next fall.

Works Wonders on CITRUS

WANT bigger oranges?

An application of Chilean Nitrate of Soda right now will insure larger fruit, better quality. Use 2 to 4 lbs. per tree in April or May. An additional application in the fall and 2 to 5 lbs. just before blossom time in February, will strengthen your trees and make a bigger yield.

A Floridian Says

"About the time the petals of the blossoms were shedding, we gave our 10 year old Valencia Orange trees 4 lbs. Nitrate of Soda per tree. We did not have enough on hand to give all the trees an application, so we had a good check on the results. Those trees that received the Nitrate of Soda have a good crop, while the others have a much lighter crop."

G. T. Smith, Winter Garden, Fla.

Free Fertilizer Book

Write for our new 44-page book "How to Use Chilean Nitrate of Soda." Gives information about all crops. It is free. Ask for Book No. 1 or tear out this ad and mail it with you name and address.

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EDUCATIONAL BUREAU

Bank of Italy Bldg.

San Jose, Calif.



In writing please mention Ad. No. 25D

The William L. Wilson Bulletin

(Panama City Pilot)

Those who did not attend the meeting of the Satsumaland Fruit Growers missed a lot. It was the best meeting this organization has held. Not only did every speaker know his subject, but each seemed to be unusually well to express himself in terms which could be easily understood. The little school house was full and benches were brought from the church nearby. Not the least of the pleasures was the most excellent luncheon served by the women of Round Lake. Those women certainly know how to cook for every luncheon they have served has been better than the preceding one.

Mr. J. Lloyd Abbott, of Silverhill Alabama, gave us, probably, the most interesting talk of the meeting, for he spoke on a subject concerning which we all want information just now. This subject was frost damage, extent and prevention. In the first place Mr. Abbott is a strong advocate of grove heating, which he believes is nothing more nor less than insurance. He said, however, that we should not fear any temperature over fourteen unless this temperature should come at a time when the sap was up in the trees. His own grove at Silverhill has survived temperatures slightly over fourteen on numerous occasions. If equipped to heat he advises firing at about seventeen for it is better to be "safe than sorry." One point which he made that gave us all a good deal of satisfaction was that freezes apparently did not effect the next year's crop. In fact Mr. Abbott told us that he had seen some cases where a freeze had actually stimulated blossoms the next spring. However, he was also very careful to point out to us that unfortunately there is no general rule regarding freezes and the after results.

After listening to what Mr. Abbott had to say, I think it is safe enough for us to assume that our trees have not been seriously damaged and that if we are given a good growing season from now on, this year's satsuma crop will be a good one.

Another most interesting thing which Mr. Abbott had to say was that the Gulf Coast Citrus Exchange, of

which he is an officer, is planning to assess their growers two cents a box for the purpose of advertising satsuma oranges this coming year. He told us that he thought his own organization would be glad to include us in its advertising on the same basis that they, themselves, would participate. The members of our association immediately accepted his proposition with the provision that the Satsumade would also be advertised and the proviso was also accepted by Mr. Abbott. If this advertising campaign is put on correctly, and we have every reason to believe it will be, there is no question but that the demand for satsumas will be greatly stimulated.

Messrs. Geo. P. Hoffman and W. A. Wilson, of the Penny Farms, were a good team. Dr. Hoffman told us of the horticultural work which this splendid farm development is doing and Mr. Wilson told us their selling plan and policies. These people propose to plant a thousand acres in satsumas and to boost their sale. We welcome them in our midst and while we consider satsuma orange growing an experiment in that soil and climate, we hope that the Penny Farms organization will make a success of their venture.

Sometime ago the Seaboard Air Line Railroad put out a pamphlet regarding satsuma oranges. This pamphlet was distributed in dining cars, railroad stations, and other places along the line of that railroad and was splendid advertising, but there were two things in the pamphlet to which Satsuma Growers in this section took exception. One was the statement that this orange could be grown satisfactorily as far North as Charleston. The other statement was that the satsuma orange could be planted and brought to four years of age for \$250.00 an acre. It was expected that a representative of the Seaboard would attend our meeting. He was prevented from doing so on account of illness, but the two points under dispute were freely discussed and there were a number of experienced growers present who contradicted these two points and backed up their statements by what seemed

Continued on page 23

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CITRUS COMMENTS

—BY—

Charles D. Kime, Orlando, Florida

This department is devoted to furthering horticultural interests of Florida. Letters of inquiry, discussion or criticism will be welcomed.

Our new citrus season for 1928 has put in its appearance with one of the heaviest blooms of many years. All varieties including seedlings are blooming heavily, and in all of those groves observed so far, the bloom appears to be strong and robust. This in itself does not mean a heavy crop. There is a chance that polonization may be weak or that the bloom may not set well from other causes, permitting a severe droppage to occur. It is a common saying that a heavy bloom means a light set of fruit. However, with a heavy bloom, weather conditions first and condition of the grove second, will largely determine the amount of the crop. If the grove is in a reasonably good condition, a tight setting is usually secured with an abundance of moisture.

With a continuance of our present favorable setting weather, the 1928 crop is getting off to a better start than any of the crops of the past several seasons. It is only reasonable to expect a heavy setting of fruit in all varieties as all of the varieties are blooming.

Successful marketing of a large crop must be aided by every device at the grower's command, of which the actual production of the fruit is only one. Much more is required than simply the producing of bright crops, though the production of said crop is one of the necessities.

When growers unfamiliar with the possibilities of crop pest control become enthused with the idea that they must produce a bright crop, they are in a position to very easily waste considerable money and thereby bring to an untimely end the enthusiasm which they should always have for producing bright fruit.

There are available many plans looking to bright fruit production. Any of them call for some experience in their handling if they are to be carried through successfully. When we realize the fact that a very small percentage of our groves are sprayed or dusted, and we inquire into this condition, we will find that it is usually based on lack of information, lack

of funds, bad results from previous experience or a lack of realization of the sales value of bright fruit.

One of the biggest stumbling blocks which the grower must face is the adoption of a definite policy or plan which can be followed through with some degree of ease and some hope of success. The spending of money on a hit and miss schedule is to be condemned and is something which none of us are enthusiastic about undertaking.

During the coming season we may or may not be able to handle the total amount of the crop successfully through our present marketing organizations, but there is no question that the present marketing organizations could handle all of our brights and goldens successfully and if only these were shipped they would be crying for more. Even with the competition of lower grade fruit, BRIGHT fruit will practically always sell at a premium above the market quotation.

health and general condition.

These particular growers recognize the fact that the main pests with which they must deal are rust-mite and purple scale, as these two pests are the main cause of serious fruit blemishes. For the rust-mite they have consistently used a Sulphur dust. For purple scale, they have used oil emulsions. For melanose, they have depended on the control of scale insects and on pruning. These growers have allowed the friendly fungi to remain on their trees as unmolested as possible and have repeatedly aided in their introduction and spread.

From season to season the frequency of their control applications have varied, but in the main the number of dustings have not been less than two, not over four and the number of sprays one or two. Their work has lined up very closely and consistently according to the following table:

ORANGES AND GRAPEFRUIT DUSTING AND SPRAY TABLE

For Commercial Control of Rust-mites and Scales in Groves with Light Infestation of Scale and White-Fly. This table does not apply to Lemon-Scab.

Disease or Pest	First Control Dusting	Second Control Dusting	Third Control Oil-Emulsion Spray
	For Rust-mites and other Spider Mites	For Rust-mites and other Spider Mites	For Scales and White Fly, and less extent Spider Mites and Rust-mites.
Material to use.	Use Sulphur Dust in suitable amount per tree.	Use Sulphur dust in suitable amounts per tree.	Use Oil-Emulsion 1-50 or 1-45
Time of year	Usually during May, after Rust-mites appear on leaves	Prune during any month while fruit is still on the tree if Rust-mites increase seriously.	During cool weather, of the winter months after September.
Where to Apply	Cover leaves, fruit and all green wood.	Cover leaves and fruit and all green wood.	On trunks of the trees, large limbs and small twigs and inside of tree.
Result Sought	To kill adult Rust-mites and young mites as they hatch.	To kill adult Rust-mites and young mites as they hatch.	Tree health for succeeding season.
Fruit	Keeps fruit from Rust-set injury	Prevents Rust-setting by Mites	Enables fruit to hold better. Improves carrying quality.

It has been my good fortune during the past several years to have an intimate part in the results from certain dusting and spray work on several large grove properties. The plan which they have followed is about the simplest of any that can be evolved and "works-in" very nicely indeed on any grove property under similar surroundings, where such groves can be considered about the average in

During the present season the adoption of a simple program is of more importance than at any time in the history of the industry. If the above suggested schedule is followed it should be borne in mind that there is a possibility of a third infestation of Rust-mites, especially on fruit which is held late in the season. In such cases there is the choice be-

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BLUE GOOSE NEWS

Monthly News of American Fruit Growers Inc.



Edited by The Growers Service Department

VOLUME 2—No. 5

ORLANDO, FLORIDA, APRIL 1, 1928

PAGE 1

MORE PROPAGANDA COMES TO SURFACE

By J. R. Crenshaw, Traffic Manager

In last month's issue we called attention to the considerable amount of railroad propaganda which has been put into circulation in Florida during the past eighteen months; and suggested that the growers might well be wary of general statements relating to problems connected with selling of citrus fruits unless those statements are directly traceable to sources known to be friendly to the movement instituted by the growers and shippers for the complete readjustment of freight rates on Florida fruit and vegetables.

Since this was written a recent issue of a Florida metropolitan daily newspaper has carried a long story concerning the granting by the railroads of the privilege of mixing fruits and vegetables in transit. It is notable that the request made to the railroads for this privilege did not come from the Growers & Shippers League of Florida, nor is any grower or shipper quoted as having asked for it. The theory is set forth that this will enable putting mixed carloads into places where solid carloads of a single commodity can not well be handled. The theory is all right but our prediction is that this will be found of very small value in practice. It was tried out years ago in Florida and since has been practically abandoned.

The shipment of mixed carloads of citrus fruits and vegetables from California has shown a large decline in recent years. This has been accounted for by the rapid growth of automobile highways over the country and the distribution of fruits and vegetables from the larger centers by trucks. Dealers in smaller towns today prefer to fill in their stocks by short truck hauls from larger centers rather than to buy mixed carloads outright.

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HEALTH AUTHORITY ENDORSES ORANGES

Recently there has been received in Florida a number of copies of an interesting pamphlet called "Oranges for Health," and issued by the Chicago Commissioner of Health, Herman M. Bundesen, M.D., Ss.D.

This attractive eight-page pamphlet printed in three colors starts out with the subject, "The Orange Habit—What Orange Juice Gives You," and speaks first of the vitamins and the importance particularly of vitamin C in the diet.

The pamphlet ends with a three color photograph of "Lindy" and the Spirit of St. Louis, below which are the words, "Oranges for Dash and Daring," while the final sentence reads, "Lindy," famous aviator when offered wine or orange juice in Paris said, "Orange juice if you have it, thanks."

The pamphlet calls attention to the fact that the Merchant Ship Act of 1894, which required all English ships to carry enough fruit juice to furnish each member of the crew with at least an ounce a day, first called attention to the value of citrus fruits such as oranges and lemons to prevent scurvy.

The pamphlet continues by saying oranges have a generous sugar content in a form easily taken up by the body. Without added sugar oranges may be included in the menu in any form and will furnish nourishment without any harmful effects. A glass of fruit juice before a meal or between meals is appetizing and refreshing and furnishes an excellent balance for the daily diet of cooked foods.

The commissioner of health for Chicago goes on to say "Oranges help to combat tartar and decay. The juice of citrus fruits contains the phosphate and other minerals necessary for sound teeth. We are in daily need of the bone and tooth-building salts of oranges."

Continued on page 2

CITRUS CROP IS CLEANING UP FAST

To March 30 total shipments for this season amounted to 31,577 cars, divided as follows: Oranges 15,006 carloads; Grapefruit 11,083 carloads; and mixed shipments of 5,488 carloads.

There is no question but that the crop is being cleaned up rapidly. As this is written many packing houses have closed down, their operations for the season being completed, and others are closing. However, it is now self-evident that before the movement of fruit ceases, the total shipments for the season will have exceeded considerably many of the early crop estimates.

This is about in line with what has happened before. In short crop years the market will take much fruit which in normal years would have to be classified as unmarketable. Thus in short crop years fruit is apt to continue to make its appearance in small quantities after the estimated crop has been exhausted. In years of large crops just the reverse is apt to be true. Growers are discouraged against picking low grade fruit and even a portion of the estimated yield is very likely to be allowed to fall on the ground, instead of being packed for shipment.

The grapefruit situation has been a bit unusual. Prices obtained for late-bloom grapefruit during the latter half of March cannot be said to have reflected the true value of it. This was due to heavy shipments of late-bloom grapefruit during the latter part of February and the first portion of March which loaded the markets with this late-bloom fruit. Reports from the markets indicate that it was lacking in flavor and did not prove popular with the consuming public. Nor did the consumers come back for more. This coupled with the unusually heavy shipments resulted in almost all markets being overloaded with late-bloom grapefruit.

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BLUE GOOSE NEWS

OFFICIAL publication of the American Fruit Growers Inc., Growers Service Department, published the first of each month in the interest of the citrus growers of the state of Florida.

EDITORIAL ROOMS
502 Yowell-Drew Building
ORLANDO, FLORIDA



PSYCHOLOGY

The season which will very shortly close has been notable for a number of reasons. The thing which naturally stands out most strongly is the relatively big average prices realized for the Florida citrus crop as a whole. It is claimed by some, and it is quite probably true, that it has set a new high price record. That is something which the growers can comfortably and gratefully remember.

There is something else, however, which deserves the careful consideration of both growers and marketing men. That is the rapidity and ease with which the crop has been moved out while maintaining price levels adequately.

It thus becomes self-evident that similarly sending forward a normal crop, say of twenty or twenty-two millions of boxes, if intelligently distributed over the much longer normal shipping season, should in the future present no material difficulty.

It rather looks as if the psychological phase of our marketing operations has up to now been underestimated in importance. It also looks as if most of the psychology involved was right here at home in Florida.

Month after month during this present season shipments from Florida very closely approximated the volume of shipments during the same periods in other years, yet prices held up in splendid fashion. As far as the wholesale and retail trade could judge there was no evidence

of any shortness of supply; but they paid the higher prices asked willingly enough. The actual shortness of this season's crop is reflected in the curtailment of the length of time packing houses have operated; but at the height of their operation they supplied the markets with plenty of fruit.

If there is a lesson in this it would seem to be that Florida growers and shippers previously have allowed their knowledge of big crops on the trees to trouble them unduly. Apparently the demand for both oranges and grapefruit from the consuming public has expanded to very considerable proportions. If that were not true the public would not have paid the present season's prices so readily. What is needed then in season's of normal production is simply greater calmness and assurance on the part of Florida growers and shippers.

Calmness and assurance breed cool judgment and careful consideration of problems of the moment. Cool judgment would dictate moving large crops forward in an orderly and systematic manner, thus realizing maximum prices.

If however judgment is unseated by a panicky feeling due to knowledge that there is a full normal crop to be sent forward, then impulsiveness and fear will dictate policies and action. Impulsive and fearful people generally are licked even before they start. They not only are incapable of doing their best themselves, but they communicate their panic to others until cool judgment is impossible. When a whole industry is swept by timidity it is incapable of properly calculated action.

This season would seem to teach something concerning the true value of Florida oranges and grapefruit, when handled in a reasonably orderly fashion. Those who early become panicky when faced with large crop figures must realize that their timidity is apt to be costly both to them and to their neighbors. Instead of exerting undue influence to have their own crops marketed speedily, thus leading to gluts and market slumps, they may with profit to themselves and others recall the experiences of this present season.

We need to be more heedful of our psychological reactions, our own psychology right here at home.

MORE PROPAGANDA

COMES TO SURFACE

Continued from page 1

Instead of this widely heralded "concession" being of true value in aiding the distribution of the Florida crop, it is more than apt to prove valueless. Not only so, but seasoned shippers realize that this "concession" possibly may be brought forward to offset certain of the requests of the growers and shippers as contained in the Line Haul Rate Case now pending.

The Growers and Shippers League is truly representative of the great bulk of the tonnage of fruits and vegetables in Florida. Its affairs are in the hands of the responsible executives of the largest shipping concerns, whose efforts are supplemented by the best expert traffic talent available. Matters vitally affecting the fruit and vegetable industry, therefore, should at least be presented to the Growers and Shippers League for its consideration before projects are put forward and requests are made, "on behalf of the fruit and vegetable industries of Florida".

HEALTH AUTHORITY

ENDORSES ORANGES

Continued from page 1

Another portion of the pamphlet is devoted to the subject of oranges in convalescence and adds, "When a special diet and careful feeding are necessary for a return to health, the vitamin content of the food served the patient is a matter requiring careful planning of the meals."

The pamphlet is nicely illustrated showing oranges and orange juice on a table with a row of books, below which are the words "Food authorities agree. Almost all books on nutrition, including U. S. Government pamphlets, advise the use of orange juice as an important part of the diet." Another picture shows a little girl warming her hands by a fireplace, while in the background the artist has sketched a glass of orange juice and below it the words, "Oranges for heat and energy."

Another illustration shows a traffic officer on duty in the midst of the rain, and below are the words "Oranges to withstand hardship." Another illustration shows a boy jumping hurdles with a glass of orange juice in the background and below the words, "Oranges for strength and endurance." Another picture shows a boy at school with a glass of orange

TO the officers, directors and members of the Florida State Horticultural Society we extend greetings and congratulations upon the occasion of the Forty-first Birthday of the Society. The unselfish purposes of the organization are demonstrated by its long life and usefulness to the growers of Florida. May it long continue to count its birthdays; and may its usefulness and philanthropic spirit long be preserved.

juice in the background and the words, "Oranges for a clear mind and a bright eye."

In front of another glass of orange juice is a boy playing baseball and below the words, "Oranges for vim, vigor and vitality." A fine looking girl is shown in front of another glass of orange juice with the words, "Orange juice for a fine complexion." A fireman is used to illustrate the phrase, "Oranges for men of courage," while below a picture of a group of business executives gathered about a desk is the phrase, "Oranges for vigorous leadership."

CITRUS CROP IS

CLEANING UP FAST

Continued from page 1

fruit. As far as early-bloom grapefruit was concerned the situation was reversed. There was not enough early bloom grapefruit during this period to supply the demand adequately. This situation was illustrated in certain of the auction markets where at times on the same day some late-bloom grapefruit brought but little better than freight and packing charges yet early-bloom grapefruit

sold at prices to net the growers most satisfactory returns.

Grapefruit shipments dropped off in the last part of March. With an orderly movement of what little grapefruit remains in the state, there is apparently no reason why all the remaining grapefruit, both early and late-bloom, should not realize very good prices.

Reports reaching us from Porto Rico indicate that their total shipments of grapefruit to New York should not exceed five thousand boxes weekly during the next two months. With this light movement from Porto Rico and the very light supply remaining in Florida it would seem that nothing but a very strong market may be anticipated.

Indications are that late-bloom grapefruit should be most profitable if held for the May market. It looks as if there should be bare many spots in the May grapefruit market which should enable the realization of satisfactory prices on late-bloom grapefruit, probably considerably better than late-bloom grapefruit will obtain if shipped earlier.

In Valencias Florida's strength lies

in the light supply which still remains to go forward. Reports from California indicate they have about the same quantity of Valencias and intermediate varieties of oranges to move from now on as they did last season at the same time. California oranges have been selling for considerably less money than Florida oranges. This has operated to turn the markets toward California oranges, simply as a price proposition. Florida oranges, however, are of most excellent quality and the major markets alone should consume the remaining supply at very satisfactory prices.

FRESH FRUIT EXPORTS

SHOW MARKED GROWTH

With total United States exports of agricultural products showing only a slight increase, the rapid growth in exports of fresh fruits during 1927 stands out prominently in government reports.

Fresh apple exports in 1926 of 1,851,000 barrels and 5,464,000 boxes, increased in 1927 to 4,483,000 barrels and 7,844,000 boxes, with an increase in value of approximately 70 per cent.

UNIFORMLY



THE BEST

Marketing agencies and outright purchasers of fruit must stand or fall upon the established record of their payments to the growers. Particularly is this the case with the American Fruit Growers Inc. As a commercial organization it can offer no appeal to sentiment, and attempts none. Also its accumulation of tonnage must depend upon its own efforts, unaided by the solicitation of interested growers.

Those growers it serves must be convinced of its superior selling efforts in their behalf, else they would not be patrons of its service.

The continuing growth of the business of this organization in Florida is thus very significant.

It has been compelled to recruit its patronage from among growers who already were thoroughly familiar with the other services available for handling their fruit. And the most significant thing is its retention of the good will and patronage of those growers it has had opportunity to serve. Its records show what is, we believe, the smallest change or turnover among its grower-patrons of any Florida selling organization.

Yet from year to year it grows, by the addition of newcomers to the ranks—growers who have been attracted by their observation of the average results obtained by neighbors and friends. Results obtained for the growers have built, and continue to build, this business.

American Fruit Growers Inc.

Orlando, Florida

DEPENDABLE



QUALITY

April, 1928

CITRUS COMMENTS

Continued from page 16

tween a combined oil-emulsion and lime-sulphur or another application of sulphur dust.

As has been pointed out before, Rust-mites are considered serious when six to eight mites may be observed in the field of a 12-x hand lense on the rind of the fruit. The common method of checking this is to make a series of observations through the property and note down on a grove record card the number of mites observed. If only a small number are found, this check gives a means of estimating when a re-check may be needed. This work is easily done and calls for very little practice before being satisfactory and safe.

Under the average commercial application, the use of lime-sulphur spray instead of dusting is perfectly satisfactory and seems to give a slightly better control than is secured with the average commercial application of dust. During rainy weather the effectiveness of either may be seriously impaired, though dusting can be easily repeated where spraying again is often impossible.

This plan as outlined, is suggested as covering the main amount of work which seems necessary to maintain tree health during any period of years and at the same time secure bright fruit. It is being successfully used by a number of growers, any one of whom would be perfectly willing to personally vouch for its effectiveness.

WILL CAN GRAPE-

FRUIT IN MIAMI

Machinery which will form the equipment of the most modern grapefruit canning plant in the world, and the largest plant of its kind in Florida, is in Miami and was recently put in operation, according to a statement made by Harry S. Pickering, president of the Pan-American Canning Corp., before the Greater Miami Manufacturers' Association. The plant will preserve grapefruit during the year, later turning its operation over to the canning of pineapple. It is thought that the operation of the plant will be continuous throughout the year, and guava products may be made later.

A portion of Pier 1, with water and rail facilities for shipment of the products, has been secured from the city of Miami, and 125 people will be employed, said Mr. Pickering. The plant will have a daily capacity of

THE CITRUS INDUSTRY

12,000 cans or 500 cases of canned grapefruit, which will be marketed under the "PRIZE CHEST" brand, with an attractively designed label.

Mr. Pickering has been in Miami for more than a year working on the proposition, which will combine to "prevent waste" of fruit and save to the growers money which he might not otherwise receive.

Vance W. Helm made an address on the industrial possibilities of Miami incident to the agricultural growth which it is apparent will take place as roads are extended and water control accomplished. Miami must do something to supply cargoes for incoming ships and agriculture and industry will go hand in hand toward balancing the commerce of the port of Miami.

More than 140 persons attended the session of the Association held at the Chamber of Commerce lobby. F. C. Landers, president, announced a meeting of equal interest next Tuesday.

HOLMES COUNTY WOMEN

CARRY ON VARIED LINE

ACTIVITIES IN MONTH

Bonifay, Fla.—In one month recently the home demonstration women, girls, and boys working with Mrs. Bettie A. Caudle, home demonstration agent, have set out 3,000 fruit trees. One girl at New Hope put out 20 orange trees, 23 apple trees, 57 peach trees, 12 plum trees, 37 grape vines, 42 pear trees, six pecans, 18 blueberries, and 16 rose bushes.

During the same month Mrs. Caudle culled 500 chickens, held 27 feeding demonstrations, four clothing demonstrations, got 10 people to start on remodeling their homes, and six new homes were planned. Mrs. Caudle visited 80 homes to instruct in culling chickens, testing seeds, selecting garden spots, discuss soils, fertilizers, planting artistic yards, planning for remodeling old homes and building new ones, giving millinery lessons, helping boys with their club pigs and their corn land, canning chickens, and visiting club members who were sick.

Club boys in Madison County sold 60 purebred pigs during February. Thirty of that number were sold to new pig club members.

One of the newest cooperative marketing groups in Florida is the Broward County Poultry Association,

"Please Say You Saw It In The Citrus Industry."

Twenty-one

which was organized recently by County Agent C. E. Matthews.

Warehouse Stock of

PACKING
HOUSE
SUPPLIES

A complete line from the foremost manufacturers and quickly available.

Non-Bruise Picking Bag

The sensation of the season. Now in use by many leading shippers, and pronounced the one best aid to fast picking without bruising fruit. Will outlast many less well made bags. Costs no more.

Southeastern
Electric & Supply
Co.

Orlando, Florida

BLUESTONE
SULPHUR

—and—

Heavy Chemicals

CHASE & CO.
Sanford, Florida

The Sure Spray for Aphids



No Odor
Non Poisonous
Pleasant to Use
Does Not Require Soap
Mixes with Other Sprays
Can be used with Hard or Soft Water

Your Dealer Has DERRISOL

FLORIDA REPRESENTATIVE
PENINSULAR CHEMICAL CO.
Orlando, Florida

PLANS AND PURPOSES

OF FLORIDA STATE HORTI-

CULTURAL SOCIETY

Continued from page 5

the use of legumes. I planted crotonaria last July, and if I ever saw a bug on any of the crotonaria I did not recognize him. There were no bugs. The same is true of cow peas. When so planted they are free from worms and bugs. Is this due to the time of year, to the stage of the moon, or why is it? We can laugh at it, but when such results are obtained, investigators should stop and take notice.

I spoke last year on the "Sandwich" method of improving our fruit. I have seen every reason since to believe that what I then said is true, and that this fact is known to some of our best authorities. The apple people practice it, and I think that we are going to have some results that may get us somewhere in this game of producing better fruit.

We hear of experiments in fertilizing, but we seem to be getting nowhere with a definite program. Colison had a series of experiments that seemed to prove conclusively that a formula of 5 ammonia, 6 phosphoric acid and 6 potash gave the best results of any mixture. I have seen no report of experiments on bearing trees, and if there are such experiments, we would welcome the results, so that we will not always be going blind. This is one of our most important problems.

The stock on which fruit is grown has much to do with its quality, and certainly has a lot to do with its quantity. All these subjects, and others, will receive the attention of experts at the Annual Meeting in Winter Haven.

AMERICAN FRESH FRUIT

EXPORTS INCREASE

Continued from page 9

erage over 3 per cent of production. Canada is principal market for lemon exports, taking 232,000 boxes (75%) in 1927. Smaller foreign markets and their takings were: New Zealand, 16,000 boxes; China, 15,000; Japan, 14,000; Cuba, 10,000; the Philippines, 7,000; and Australia, 7,000.

United States exports of pears in 1927 amounted to 1,134,000 boxes as against 1,375,000 boxes in 1926 and an average of 1,069,000 boxes a year in 1922 to 1926. Exports of pears average 5 per cent of production. The United Kingdom was the principal market for American pear exports in 1927, taking 461,000 boxes while Canada was a close second with 443,-

THE CITRUS INDUSTRY

000 boxes. Smaller foreign markets and their takings were: Brazil, 67,000 boxes; Cuba, 42,000; Argentina, 38,000; Mexico, 12,000; the Netherlands, 5,000; Sweden, 4,000; Panama, 3,000; Newfoundland and Labrador, 2,700; Venezuela, 2,300; China, 1,700; Dominican Republic, 1,300; Denmark, 1,600; and the Philippines, 1,000.

United States exports of grapes in 1927 amounted to 19,350 tons as against 15,325 tons in 1926 and an average of 10,900 tons in 1922 to 1926. Exports of grapes average less than 1 per cent of production. Canada is the principal foreign market for American grapes, taking 13,525 tons in 1927. Smaller foreign markets and their takings were: Cuba, 2,670 tons; Mexico, 1,00; the Philippines, 650; China, 300; New Zealand, 136; British Malaya, 135; United Kingdom, 85; Panama, 80; Salvador, 70; Colombia, 65; Venezuela, 65; and Guatemala, 60.

United States exports of berries in 1927 amounted to 11,100,000 pounds as against 8,800,000 pounds in 1926 and an average of 10,000,000 pounds a year in 1922 to 1926. Canada is principal market for American berry exports, taking 10,400,000 pounds in 1927. Smaller foreign markets and their takings were: United Kingdom, 534,000 pounds; Newfoundland and Labrador, 59,000; Panama, 31,000; Cuba, 22,500; and Mexico, 14,000.

United States exports of peaches in 1927 amounted to 370,000 bushels as against 301,000 bushels in 1926 and an average of 311,000 bushels a year in 1922 to 1926. Exports of peaches average less than 1 per cent of production. Canada is the principal foreign market for American peaches, taking 344,000 bushels in 1927. Smaller foreign markets and their takings were: Cuba, 11,000 bushels; Mexico, 6,300; United Kingdom, 3,600; and Panama, 1,200.

In addition to the exports of fresh fruits already mentioned, the United States exported 70,000 boxes of pineapples and 47,300,000 pounds of other fresh fruits in 1927 as against 59,000 boxes of pineapples and 39,400,000 pounds of other fresh fruit in 1926. Practically all exports of pineapples are to Canada. Canada is also principal foreign market for "Other fresh fruits", taking 38,400,000 pounds in 1927, while important smaller foreign markets and their takings were: United Kingdom, 4,200,000 pounds; Cuba, 2,900,000; Mexico, 927,000; and Panama, 322,000.

"Please Say You Saw It In The Citrus Industry"



NitraPo for Final Dressings Increases "Carrying Quality"

Top Prices are the returns to the grower whose crops arrive at the market in good condition.

Final Dressings of all truck crops with NitraPo will give this much desired "Carrying Quality" and the Potash in NitraPo will add many dollars per acre of increased yield and improved quality of your truck crops.

For Groves that have not had a vigorous spring growth this year, an application of from five to seven pounds of NitraPo per tree will bring astonishing results.

NitraPo is a Potash Nitrate, doubly refined and imported from South America solely by the Nitrate Agencies Company. No material being offered as a substitute for NitraPo is as pure, or will enable you to obtain the same results as with NitraPo.



Peninsular Casualty Building

Jacksonville, Florida

THE WILLIAM L.

WILSON BULLETIN

Continued from page 15

sufficient proof. It is my own humble opinion, and in this I am joined by Dr. O. E. F. Winberg, the Alabama Satsuma expert, that it is not safe to plant satsuma oranges more than forty miles away from the Gulf. I further feel that it will be difficult to raise satsuma oranges of good quality east of the Suwannee River. As for the claim that a grove can be planted and cared for to four years of age at a cost of \$250.00 an acre, somebody must have made a slip, for, though I have seen the costs on the development of a good many groves, I have never seen any figures that approach these and I have seen lots of figures showing the results of good work that are more than twice as high. We were very sorry that the Seaboard man could not be there and tell us where he got his information, if he had been correctly quoted.

* * *

In general it seems to me a little unfortunate that anyone is preaching too broad and too rapid an expansion of the satsuma growing industry. The satsuma orange is, when PROPERLY GROWN the highest quality citrus fruit that can be produced. On the other hand, when improperly grown, some yellow colored balls that are absolutely unfit for human consumption can be produced on a satsuma tree. The line between perfection and just rank failure, as far as quality is concerned, is a very narrow line. The satsuma is an unusual fruit, it has an unusual name, and every poor one that gets on the market prevents about ten good ones from being sold. If the industry is concentrated upon land and in a climate that has proven to be satisfactory, the growers can learn from each other such things as proper grading, packing, and marketing can be done much easier. Expansion can take place from such a district as a center to the benefit and not to the detriment of the business. I do not like to see promiscuous expansion even though done by good people.

* * *

One of the most gratifying things that has happened to me recently in connection with this bulletin happened yesterday in Blountstown. I found in that good city three regular readers of my Bulletin. I owe an apology to them and my other readers from now on for awhile. The Bulletins are going to be "short and

THE CITRUS INDUSTRY

sweet" because I have to slide them in where I can on account of the fact that I am "politicizing" all over the District and am home so little. I will try to keep them interesting, but they are going to be short.

—William L. Wilson.

DISTRICT HOME DEMONSTRATION MEETS PLANNED

A series of three district meetings have been planned by the State Home Demonstration Department for discussing plans for the development of home demonstration work during the year. The first of these meetings was held at Tallahassee last week and was attended by home demonstration agents from Columbia, Taylor, Leon, Gadsden, Jackson, Holmes, Walton, Okaloosa, Santa Rosa, and Escambia counties.

Miss Ruby McDavid, district agent for north and west Florida, was in charge of the program. She was assisted by other members of the state home demonstration staff.

John Bradford, representing the Playgrounds and Recreation Association of America, was present and put on an institute in recreation activities for extension workers and rural leaders. His courses were conducted at the gymnasium of the State College for Women from 7:30 to 9:30 each night.

The next district conference is planned for Bradenton, March 14-17. Here especial emphasis will be laid on the major projects of home demonstration work, including home improvement, gardening, food conservation, nutrition, poultry, etc. This meeting will be in charge of Miss Lucy Belle Settle, district agent, and will be attended by home demonstration agents from Marion, Lake, Citrus, Pinellas, Hillsborough, Polk, Lee, Manatee, and Osceola counties.

The third conference will be held at Daytona Beach during the latter part of April, and will be in charge of Miss Mary E. Keown, district agent.

Hogs fed on corn and skim milk gained 1.15 pounds per day; corn and dried buttermilk, 1.12 pounds per day, corn and shorts in equal parts plus 5.5 percent fish meal, .83 pounds per day. (In first two cases one part of fish meal was added to 10 parts of corn.)

More than 500 people were present at the club rally held at Turkey Creek in Hillsborough County during the latter part of October.

—Please Say You Saw It In The Citrus Industry—

Four Years Before=

Four years before the State Horticultural Society commenced its valuable forty years work toward increasing the knowledge of and interest in matters horticultural, our organization had already commenced its work along similar lines!

We are proud of our society's record and influence for good—may it ever increase! We pledge to it our heartiest cooperation to make Florida—as she should be—a true "Land of Flowers". Our forty-five years experience with Florida plant materials is gladly offered all members of the society—as indeed to all those interested in Horticultural Development, without the slightest cost or obligation. Correspondence always welcome. Free catalog on request.

While in attendance at the Winter Haven meeting look up our Mr. N. A. Reasoner or J. B. Hinson, and let them help you with your problems.

We still have some
Avocados unbook-
ed for May-June
delivery, tho they
are going fast.
Mangoes and other
tropical fruits still
in good supply.

Reasoner Brothers'

ROYAL PALM NURSERIES

Oneco, Florida

James Ray A.
Twenty-four

FRAME JOINS GULF-

PENINSULAR ORGANIZATION

Ray A. Frame, formerly advertising manager for Howey-in-the-Hills, has resigned that position to accept a similar one with The Gulf Fertilizer Company of Tampa and Peninsular Chemical Company of Orlando. The Peninsular Chemical Company, it was announced, would soon move its main office to Tampa when the advertising of both concerns would be confined under one management and Mr. Frame will have direct charge of both.

Mr. Frame has had wide experience in agriculture in the north and has been connected, in one way or another, with Florida agriculture for more than three years. For more than two years he has been in charge of advertising and educational work for the W. J. Howey Company, of Howey-in-the-Hills, where he made a special study of citrus culture and development.

Before coming to Florida Mr. Frame was sales manager of a large feed manufacturing plant in Chicago. There he had considerable experience in farmers' organizations, especially in co-operative marketing organizations. For about ten years

THE CITRUS INDUSTRY

Mr. Frame has made a specialty of agricultural advertising. He was secretary of the Howey Board of Trade and a director in the Lake County Chamber of Commerce in addition to his advertising position for the Howey Company. Mr. Frame has written many magazine articles along agricultural subjects.

NUTRITION PROGRAM

OUTLINED AT STATE HEALTH CONFERENCE

The food, nutrition and health program, as it is being carried on by home demonstration agents, was outlined before the recent Public Health Conference in Lakeland by Miss Mary Stennis, state nutrition specialist of the Florida State College.

In her report, Miss Stennis revealed that more than 5,000 girls and more than 1,500 women are this year carrying a major program of at least 7 months duration in food nutrition and health. As a result of educational work in better nutrition carried on in six counties there has been a marked improvement in school lunches, she said. Health and nutrition contests have been conducted locally, county wide, and state wide.

The nutrition program, as it was

April, 1928

presented, is based on food production in Florida, is educational, and is worked out on a long time plan which will be effective in getting and holding the interest of both mothers and daughters in building better bodies.

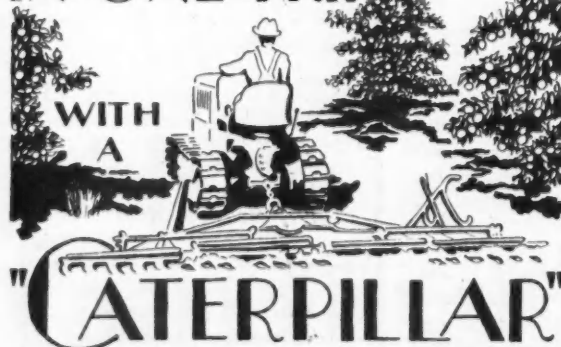
At the luncheon given for the State Health Conference Miss Stennis told of the Columbia County health program for 1928, carried on by Mrs. Lassie Black, the agent in that county. A complete health survey of all school children has just been finished in that county, thru the assistance of local doctors and dentists, and specialists from the State Board of Health and the Florida Experiment Station.

A fine by-product of community co-operative movements is better acquaintance with good neighbors.

A recent meeting dealing with fish canning and smoking in Pinellas County proved to be very interesting.

Twenty-four and one-half pounds of fish meal fed to hogs saved 155 pounds of grain in a test conducted by the Experiment Station.

WORK OUT THE CENTERS IN ONE TRIP



Larger profits commence the day a "Caterpillar" is bought. It has the power and traction to pull your implements. Its low upkeep cost and long life together with economy of operation materially reduce production costs. Its ability to work day after day with freedom from mechanical trouble makes possible a greater acreage cultivation than you can imagine unless you are already familiar with "Caterpillar" performance. Write for new prices TODAY.

The power era is here—Investigate the "Caterpillar"

MCDONALD & BURGMAN
JACKSONVILLE MIAMI

Clewiston Motor Company, Clewiston, Florida



Please Say You Saw It In The Citrus Industry

Let Us Supply Your Printing Needs

For Grove, Packing House, Counting Room or Factory. Our equipment is complete, our service prompt and satisfactory and our prices reasonable.

Bartow Printing Co.,

A. G. Mann, Mgr.

Bartow, Florida

Owned and operated by The Citrus Industry

Pest Control Pays

It is of interest to realize that the annual loss to citrus growers from lack of proper pest control is greater than that sustained by the low temperatures of the past two winters.

The necessary cost of this control is really slight while the difference between the market returns of bright and rusty fruit is quite large—often as high as a dollar per box. The abundance of white fly and scale cut down the number of boxes a tree bears.

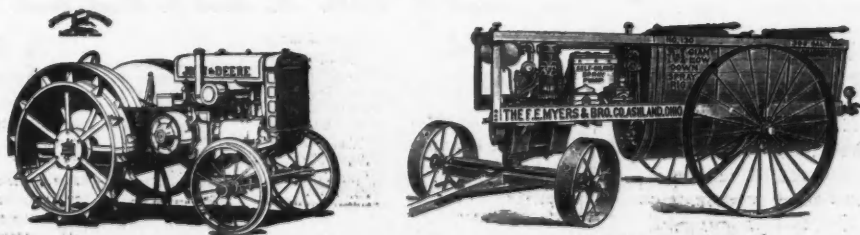
The RUST MITE season starts in early May! Whether you use dust or sulphur sprays, start in early May and be sure to treat often enough to keep the fruit bright.

For scale and white fly control use FICO-60 during the latter half of May, diluting it 1 to 60, using fish-oil soap as a spreader.

We have all grades of dusting sulphur, lime-sulphur solution and Fico-sulfur for the rust mite control and can ship on same day we get the orders.

Florida Insecticide Co.

Apopka : Florida



We are distributors for John Deere tractors and Myers spray rigs and outfits.

IMPRESSIONS

By The Impressionist

J. J. (Jess) Parrish the well known grower and shipper of the East Coast has seen long service in the state senate. If reelected in the Spring primary, and to the time this is written he is without announced opposition in his district, he will be president of the senate in the 1929 session. That is only suitable reward for service well performed by the gentleman from Titusville; but our impression is that it isn't at all a bad idea for the fruit and vegetable industry to be represented at Tallahassee in a worth while way.

B. H. (Bert) Roper, intermittent mayor of Winter Garden and long a figure in the citrus business there, recently told us a story to illustrate the curiosity of some folks. One morning a prominent Winter Garden man appeared before a group on the sidewalk and said he had just had a queer experience; had just seen something he had not seen before during a lifetime in Florida.

"I was walking down through the woods and heard a rattling, clanking noise, and a faint grunting. I walked toward it, and what do you think? There were two gophers fighting—"

"Which one, won?" was the quick interjection of one of the bystanders.

J. A. Hall of the U. S. Department of Agriculture who has had charge of the Florida bureau of information on fruit and vegetable shipping and marketing, which was established a few years ago at the instigation of the Fruitman's Club as an aid to Florida shippers, will depart from Florida for keeps with the closing of this office this Spring. About the middle of May he will take charge of the Los Angeles office to remain there permanently. This is in the nature of a promotion for Mr. Hall, because the Los Angeles office is maintained the year 'round, and because of its larger volume of tonnage is of greater importance. Those Florida men who had contact with him here will greatly regret his loss to Florida. He rendered Florida painstakingly accurate and valuable service; and brought to his job a pleasant and obliging personality. During his term

of service here he succeeded in keeping entirely clear of citrus politics, and won the respect of all for his fairness and strict devotion to duty. All connected with citrus selling will miss him here, even while taking pleasure in his promotion.

From recent discussions within our hearing we obtain the impression there is in some places confusion as to the relationship of the Florida Citrus Exchange and the Fruitman's Club. Some speak as if the Exchange were on one side of certain negotiations and the Club on another. The fact is that the Fruitman's Club as an organization comprehends something like 80 or 90 per cent of the citrus tonnage of the state, and that the Florida Citrus Exchange is a charter member thereof, in the same manner that it is a member of the Grow-

ers and Shippers League of Florida.

The other day we picked up an old orange box label of Merrie Sunshine fruit from California. At the bottom was the legend, "A. M. Pratt, Distributor, Redlands, California." And that is the same Archie M. Pratt who is now salesmanager for Chase & Co., and who still distributes merry sunshine, but over the radio now and after dark. Whether this Merrie Sunshine incident was before or after his long engagement as salesmanager of the Mutual Orange Distributors, the "M. O. D.", of California we do not know. We shall have to ask that of Archie.

As a candidate for member of the State Railroad Commission we do not know precisely how to act—that is in the columns of this company's pub-



FERTILIZER

The Old Way

You bought a 200-pound sack containing 150 pounds of plant food and 50 pounds of filler.

200 Pounds

8 lbs. 10% Tankage
8 lbs. Sulphate of Ammonia
20 lbs. Brazilian Guano
15 lbs. AMMO-PO
64 lbs. Acid Phosphate
15 lbs. Sulphate of Potash
50 lbs. Filler
200 Pounds

A & G Method

You buy a 150-pound sack containing 150 pounds of plant food only—no filler. You save the cost on freight, haulage and distribution of worthless matter.

Write for Our New Farm Record Book

ATLANTIC & GULF FERTILIZER CO.

C. NASH REID, President
Jacksonville, Florida

"Please Say You Saw It in The Citrus Industry"

lications. If we said nothing about it a lot of folks would consider us queer, and with justification. On the other hand this and the other publications of this company have always tried to keep clear of politics. Therefore we certainly cannot endorse ourselves; nor can we point with pride to our qualifications for the same reason. To be fair in the matter we can only mention that the other candidates in our group are Mrs. R. L. Eaton, J. O. Cassidy and a Mr. Hargrove whose initials we do not know. As we have said editorially in another of this company's publications of which we are the editor, while in THE CITRUS INDUSTRY we rank as assistant manager, "We do not believe our subscribers pay their good money in order to read praise of us by ourselves." Our impression is that our subscribers will endorse that view.

Speaking of the State Railroad Commission, recently Senator A. S. Wells chairman of the commission, and whom we are not opposing in his effort for reelection, told us a good one apropos of those two stalwart figures of the last generation in Florida, Colonel Robert W. Davis of Gainesville and Henry St. Clair Abrams of Tavares. It seems that following an exciting row in a convention they found themselves in the hands of the authorities in a small town in a portion of the state where they were not well known by sight. A hasty conference brought out the necessity for alibis and aliases. A justice of the peace addressed Mr. Abrams sternly:

"What is your name and where are you from?"

"My name, sir, is Joshua Kennicott of Arcadia, Florida."

Turning to Colonel Davis the justice repeated: "What is your name and where do you live?"

Straightening himself and throwing out his chest, Colonel Davis replied:

"Sir, my name is Henry St. Clair Abrams of Tavares, Florida."

Up at Leesburg we dropped in to see Jefferson Thomas, and to find him surprisingly improved in physical condition. He looks ten years younger than he did five years ago and is full of vim, vigor and vitality. Our impression is that to see him thus, even better than his old self, is a sight to cure sore eyes.

From what we hear upon our
Continued on page 32

Heavy Bloom

indications point to a Big Crop

A large citrus crop means top prices will be possible only upon better grades of fruit. In line with assuring better fruit, attention should be given at this time to two diseases which adversely affect the appearance of fruit and health of producing trees.

Melanose and Lemon Scab are the two which respectively menace oranges and grapefruit, but can be controlled if handled rightly. Authorities agree the proper remedy is Bordeaux and Oil Emulsion. These materials in proper combination, perfectly emulsified and accurately compounded, are found in most usable form in Bordol Mulsion (Patented, Trade Mark Registered). Bordol Mulsion is now in its eighth year of general use by successful citrus growers in Florida.

At 1 to 50 after the bloom petals have fallen and fruit has set it will control melanose and lemon scab, both of which so greatly detract from the market value of otherwise good fruit. In addition, being both a fungicide and an insecticide, Bordol Mulsion will effectively control scale pests, white fly and sooty mold and leave trees in fine condition.

Bordol Mulsion is an invariably smooth and uniform mixture, of about the same consistency as an oil emulsion, easily handled, and readily mixed without waste or loss of time. The cost, applied upon the trees, is actually less than that of homemade mixtures. We will be glad to refer you to users of Bordol Mulsion in your vicinity, if you will ask for their names.

J. Schnarr & Company

Pioneers in 1906 --- Leaders Still in 1928
Complete line of Sprayers and Dusters

Orlando, Florida
Winter Haven, Florida

THE GROWERS' OWN PAGE

BROTHER BILL JR.'S LETTERS

March 5, 1928

Dear Jim:

I have just returned from a trip north, during which time I have had some of the most interesting experiences of my life, though they were quite different in character from any that I could have anticipated. Since I got back, I have walked through the groves not only with the pleasure one takes in returning to a well loved spot, but with a new conception of what my job growing oranges means to thousands of people whom I shall never see and what it ought to mean to me on their account. You may write it down in your little book that from this time forward the fruit that is grown on this grove will have even more thought given to it than it has received in the past, and that no effort will be spared to pack into it all the food value humanly possible.

One of my college friends is a physician in New York City. He has built up an excellent practice and as nearly as I could judge is held in esteem by other members of his own profession. It seems there was some sort of a medical meeting going on and one evening he had half a dozen physicians out home for dinner. He had pressed me so cordially to make him a visit that I was staying at the house and was present at the dinner. Some case came up for discussion among them, to which I did not pay much attention because I did not understand a great many of the words they were used, until I heard one chap relate with enthusiasm and conviction the story of his success in treating the case with oranges. I learned afterward that it had been a case of persistent vomiting by a child about three years old, which had been brought under control by the use of one teaspoon full of ice cold orange juice every fifteen minutes. The chap who condescended to tell me about it in plain English said that of course the child threw up the first few teaspoonsful as she had everything else he had tried, but that she gradually began to be able to retain it a little longer until the irritation in the stomach was relieved and the later doses were retained.

He took the trouble to tell me this

This department is devoted to the growers, for their use in giving expression to their views and a discussion of growers' problems. Any grower is welcome to make use of this department for the discussion of topics of interest. The only requirements are that the articles must be on some subject of general interest, must be reasonably short and must be free from personalities. The editor assumes no responsibility for views expressed, nor does publication imply endorsement of the conclusions presented.

because my friend, not desiring to see me left entirely out of the conversation, said: "Bill spends his life raising oranges in Florida and I think he

would be interested in that little story." Well, that statement of his turned them all loose at once. I didn't know so many questions about oranges could be asked in so short a time and I didn't seem to know the answers to any of them. Here are just a few of them and you may try your newly fledged knowledge upon them.

Why is it that some oranges loosen the bowels without affording much nutriment?

Continued on page 32

ETHYLENE

*Universally used by the
citrus industry for coloring*



**Ripens, colors and blanches
fruits and vegetables**

Economical / Safe / Clean

For information write to

**CARBIDE AND CARBON
CHEMICALS CORPORATION**

30 East 42nd Street, New York, N. Y.

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Warehouses are located in all important centers in the United States



Unit of Union Carbide and Carbon Corporation

"Please Say You Saw It In The Citrus Industry"



TEXIDE

A petroleum base insecticide designed especially
to meet the needs of the citrus grower.

TEXIDE kills aphids at
one-third the cost of nicotine or
derrisol compounds commonly
used. Make a comparative check
for yourself. Write for informa-
tion, or ask any Texaco Agent.

Correspondence is invited.

THE TEXAS COMPANY
Texaco Petroleum Products
District Office, Jacksonville, Florida

Texaco Agents located in citrus centers:

Orlando	Eustis	Tampa	Titusville
Haines City	Clermont	Fort Pierce	DeLand
Lake Wales	Lakeland	Bartow	Arcadia
Avon Park	Tarpon Springs	Leesburg	Fort Myers
Kissimmee	Cocoa	Clearwater	

Thirty

FUMIGATION OF CITRUS TREES IN PALESTINE

Continued from page 11

damage to the tender foliage and the setting of the flowers. The months named for this critical period in the life of the trees varies, of course, according to the altitude above sea-level or the number of feet below sea-level. For instance, this interval commences several weeks earlier along the shores of Lake Tiberias (682 feet below sea-level) than at sea-level; at Nazareth (1,600 feet above sea-level) it will be several weeks later than at sea-level. The months named above apply to sea-level.

In the Haifa area, at sea-level work has been successfully inaugurated towards the end of April and carried on till the end of July, when high nocturnal temperatures and general conditions of dryness deterred further operations. The work has been recommenced during September and carried on until the latter part of November. This Haifa area experiences abnormally high nocturnal temperatures owing to its preclusion from the cooling night winds by the Carmel Range of hills. In other coastal districts, exposed to such breezes, it should be possible to continue fumigation, without a break, from April to November. At higher altitudes a similar period would also be available.

About the shores of the Lakes of Tiberias (682 feet below sea-level) operation have to be conducted from late September till the commencement of December with excellent results.

The occurrence of sirocco winds, during the early and late summer months, with accompanying high nocturnal temperatures (up to 100° F. in the Haifa area) and conditions of extreme dryness have caused a cessation of fumigation work for several nights together.

Palestine citrus trees can successfully withstand fumigation with hydrocyanic acid gas at temperatures considerably higher than those considered safe in other parts of the world. This is possibly due to their natural and necessary powers of resistance to the protracted, hot, dry summer experienced in this country.

Fumigation operations have been directed entirely against the further spread of the black scale towards the large and valuable orange-growing districts of Jaffa. Extended operations have been already carried out in the Haifa area, along the shores of the Sea of Galilee and in the

THE CITRUS INDUSTRY

neighborhood of Akka. The elimination of the pest is proceeding, but but the work is necessarily retarded owing to slow conditions of working imposed by the close planting of many gardens and the fact that heavily infested groves have to be treated two years in succession so as to obtain complete clearance of the scale. Some 25,000 trees have been fumigated and something like treble that number await treatment. Black scale should be under control within the next three years.

The peculiar close planting and irregular growth of the trees, as well as the rough, often sandy nature of the soil in many Palestinian citrus groves, have rendered necessary the institution of special methods of procedure in fumigation work. Unskilled labor has had to be utilized and trained almost in every instance. The following method of working in such groves has been devised to meet the above set of circumstances and has, under extended use, given good results.

The tents are first of all pulled over the trees in as straight a line as possible. In many groves it is often impossible, owing to the extremely close growth of the trees, to cover one tree at a time. Several adjacent

trees are therefore covered by one tent, care being taken to leave as little unfilled space under the tent as possible.

The operator in charge then takes the measurements of each tent, starting at one end of the row and working down it, taking each tent in succession. The measuring is performed according to accepted practice, making use of a tape measure and the scale marked on each tent. These measurements are recorded in a special book, and as each entry is made the operator in charge affixes to the tent a waterproof label bearing the number of that tent. With practice this operation is rapidly and easily performed by the operator in charge and two laborers who manipulate the measuring tape.

Shifting the tents in badly planted and ill-kept gardens occupies almost double the time required when trees are planted regularly and kept properly pruned. Under bad conditions, working with six laborers, one operator and an assistant, thirty tents and an eight-hour shift, the number of trees covered will be 140-150.

Complete records of all trees fumigated are kept by means of the operator's notebook; notes on atmospheric

Continued on page 34

PRICE REDUCED

on

"Black Leaf 40"

[In Tins]

Larger production and economies in factory processes now make it possible for us to furnish "Black Leaf 40" at decidedly lower prices. Growers should participate in these savings and we have revised our prices in tins, effective January 10, 1928, as follows:

10-pound tins - \$11.85 each
(formerly \$13.50)

2-pound tins - \$3.25 each
(formerly \$3.50)

"Black Leaf 40" the "Old Reliable" occupies a position of unrivaled leadership in the world's markets. Kindly place your order with your dealer.

Tobacco By-Products & Chemical Corporation
Incorporated
Louisville, Kentucky

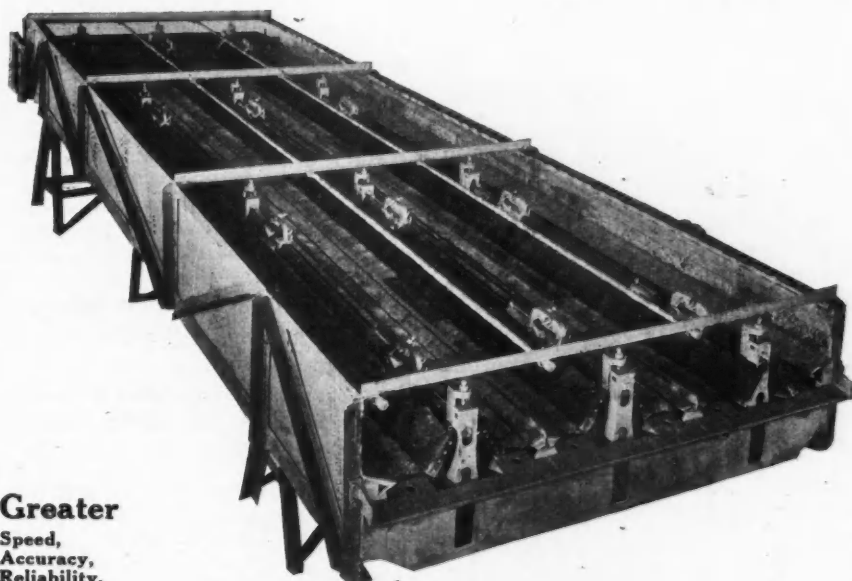
"Black Leaf 40"
40% Nicotine



"Please Say You Saw It In The Citrus Industry."

Prominent Members of the Family

of all-steel packing house machines, which are now
revising Florida citrus packing house practice

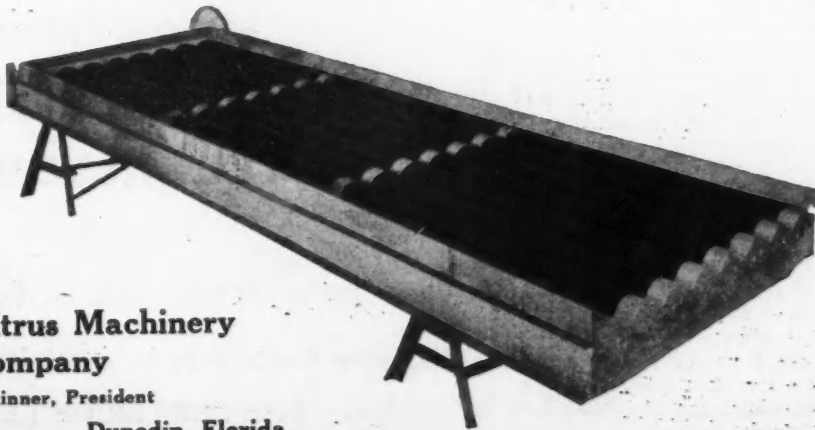


Greater

Speed,
Accuracy,
Reliability,
Rigidity,
Performance

Less

Friction,
Power,
Repairs,
Interruption,
Maintenance.



**Florida Citrus Machinery
Company**

B. C. Skinner, President

Telephone 2556

Dunedin, Florida

"Please Say You Saw It In The Citrus Industry."

IMPRESSIONS

Continued from page 27
 rounds it looks as if the recent agitation in citrus circles is due to be productive of immediate good in one direction at least, a stimulated interest in and considerably increased attendance upon the meeting of the State Horticultural Society in Winter Haven, April 10, 11, 12. This stir-about has greatly aided the efforts of Bayard Floyd and W. W. Yothers, the untiring secretary and assistant secretary respectively, to get the growers to come out. Our impression is that they will be there in force.

Refusal of the U. S. Senate to confirm the appointment of Mr. Esch upon the Interstate Commerce Commission may cost Florida one vote in the final decision upon the Line-Haul rate case brought by the Growers and Shippers League. Mr. Esch was thought to look favorably upon the requests of Florida growers and shippers for a complete readjustment of the rate on fruits and vegetables. However, we have heard from a Washington source that the rejection of Mr. Esch was in good part due to the Senate's feeling that the Interstate Commerce Commission was rather getting out of hand, that it had been usurping authority not intended to be granted to it in originally framing the law.

THE GROWERS' OWN PAGE

Continued from page 28

Why is it that other oranges seem to have very great nutritive value without much of a laxative action?

Why is it that Florida cannot raise better looking oranges, so that they will compare more favorably in appearance with California fruit?

Why does Florida not undertake an advertising campaign to physicians and dentists, on a scientific basis, giving worth-while knowledge about oranges and grapefruit?

Why does she not undertake a similar campaign to the public under the guidance of some well informed professional man?

Why is it permitted that grove owners in Florida shall rush into their groves a day or two after a freeze and ship to northern markets, fruit known or suspected of having been frosted or frozen? Such fruit may be the cause of great damage to those who eat it, either children or adults.

Why can it not be made possible for people in moderate circumstances who need oranges as part of the daily diet, to buy good oranges of medium size at prices that people in such cir-

THE CITRUS INDUSTRY

cumstances can afford?

I did the best I could to answer these and other questions, but always with the feeling that I was making a poor showing. I think they must have sensed this, because, all of a sudden, they became a coherent group trying to give me a new conception of the value of the right kind of oranges to their patients and the harm which might result if fruit of poor quality or fruit injured by a freeze was shipped.

Now, Jim, I have some cultivation to do after these good rains we have just had, so I am going to tell you about the various uses these doctors put on fruit tgo, in my next letter.

It was an eye-opener for me and a wonderfully enlightening conversation. A citrus grove is a real aid to health and longer life, and to think I am just finding that out.

Affectionately,

Your Brother Bill.

The tobacco crop of Hamilton County is getting off to a good start. The plant beds are looking fine, says County Agent Sechrest, and there should be plants enough for everyone.

A drain for carrying off waste water from the house will save the housewife many steps.

Congratulations

We extend cordial congratulations and felicitations upon the occasion of the Forty-First Birthday of the

Florida State Horticultural Society

Its research over this long period of years has been of incalculable benefit to the advancement of citrus growing. By the emphasis it has put upon the necessity for producing fruit of better quality, it has made it possible for us to obtain for our trees the recognition which their ability to produce better quality fruit deserves.

Lake Nursery Co.

Capital \$300,000

Oldest Sour Orange Nursery In Florida

Leesburg, Florida

HOTEL HILLSBORO

Tampa, Fla.

TOP O' THE TOWN

European Plan, Fireproof 300 Rooms With Baths

THE CENTER OF TAMPA

"Phase Say You Saw It In The Citrus Industry."

**CORRECTED PROGRAM
OF FLORIDA STATE HORTICULTURAL SOCIETY**

Continued from page 8

er, Asst. Quarantine Inspector,
Key West

Address—"The Nursery Inspection
Situation" J. C. Goodwin, Nursery
Inspector State Plant Board,
Gainesville

Address—"Research Work in Fumi-
gation" Dr. A. F. Camp, Associate
Horticulturist, Gainesville

Discussion Led by H. Harold Hume,
Glen St. Mary

Thursday, April 12, 2:00 P. M.

Address—"Avocados from the Grow-
er's Viewpoint" W. F. Ward, Se-
bring

Address—"Avocados in Polk County"
John Morley, Lake Alfred

Address—"Avocado Growing on the
Lower East Coast" H. W. Dorn,
Larkins

Address—"Tung Oil—A New Florida
Industry" B. F. Williamson,
Gainesville

Address—"Cost of Handling Citrus
Fruits from the Tree to the Car"
Prof. H. G. Hamilton, Gainesville

Address—"The Production of Better
Fruit" H. E. Stevens, Orlando

Thursday, April 12, 8:00 P. M.

Address—"Lengthening the Shipping
Season for Citrus Fruits" B. D.
Barber, Clearwater

Address—"The Decay of Citrus Fruit
in Transit" Dr. H. R. Fulton, Wash-
ington

Address—"Irrigation of Citrus
Trees" F. E. Staebner, Washing-
ton, D. C., E. F. DeBusk, Gaines-
ville

Address—"Protection of Citrus Trees
from Cold" R. J. Kepler, Jr., De-
Land, Dr. A. F. Camp, Gainesville

Address—"Hay Crops for the Citrus
Grower" Frank Holland, Bartow

Election of Officers

Selection of Meeting Place

**COMMUNITY CLUB HOUSE
IS OPENED IN HOLMES**

The first home demonstration community club house in northwestern Florida was opened at Leonia in Holmes County recently. Men, women, and children, with the cooperation of Mrs. Bettie Caudle, home demonstration agent, helped in the construction of the house. In addition to people of the community, the opening celebration was attended by a number of prominent citizens of the county.

It is planned to install modern home demonstration equipment and make the house a center of community activities.

It can be done=

Bright fruit must be the watchword if bigger profits are to be realized.

Hit or miss methods won't make the grade

From mid April to early May Melanose and Lemon Scab are the heavyweight antagonists—and Bordol-Mulsion should be in the other corner of the ring to win the verdict—a little help in the way of thorough and timely spraying is your part of the fight.

Bordol Mulsion is an invariably smooth and uniform mixture, of about the same consistency as an oil emulsion, easily handled, and readily mixed without waste or loss of time. The cost, applied upon the trees, is actually less than that of homemade mixtures. We will be glad to refer you to users of Bordol Mulsion in your vicinity, if you will ask for their names.

J. Schnarr & Company

Pioneers in 1906 — Leaders Still in 1928

Complete line of Sprayers and Dusters

Orlando, Florida

Winter Haven, Florida

FUMIGATION OF CITRUS TREES IN PALESTINE

Continued from page 30
ical conditions and any other events of fumigation interest are also made. The practice has been adopted of marking the trunk of each tree with whitewash as soon as the tent is withdrawn after fumigation.

By fumigating a heavily-infested garden during two successive seasons, 100 per cent elimination of the black scale has been obtained. These results have been observed by examination of the trees 4-5 months after treatment and at the time when black scale, if present, will be at its maximum. Increased growth of foliage and superior yields of clean fruit have also been noted.

At the present stage of operations it would appear as though slightly better results are obtained by fumigating during the early summer months, i. e. before thoro reinfestation has taken place from the previous foliage.

The fact that there is an ever-increasing number of requests for fumigation from growers themselves indicates some measure of appreciation on their part.

The recent institution in Palestine of a Plant Protection Ordinance has made the prosecution of the campaign against the black scale a somewhat easier matter. In accordance with similar Ordinances elsewhere, the Palestine Government is now empowered, where necessary to compel a cultivator to control the spread of certain pests (of which the black scale is one) in the lands under his occupation, and it is proposed to carry on fumigation work under this Ordinance in future.

Experiments are now in hand on the use of calcium cyanide dust. If these prove successful, the pot method of fumigation with sulphuric acid and sodium cyanide may be superceded.

Perhaps its is not too much to hope that the successful institution of up-to-date methods of controlling the most pernicious insect pest of Palestine's valuable citrus orchards, and the interest aroused among local cultivators in such methods, may lead to a furthering of the interest in the direction of improved cultivation, and the evident lucrative possibilities of this crop may be taken fuller advantage of than they are at present.

Florida is now producing approximately one-half of the poultry products which it annually consumes.

THE CITRUS INDUSTRY INCREASED EFFICIENCY NEEDED IN CITRUS INDUSTRY

Continued from page 7

US-PRODUCTION, SCIENTIFIC FERTILIZATION, AND THEN THE OTHER CULTURAL FACTORS, will change the Red Ink to Blue.

Hogs fed corn 3 parts and peanut meal 1 part gained .70 pound per day while those fed corn alone gained .20 pound per day.

Permanent pastures of carpet grass and lespedeza will grow in our woodlands. In this way the land may be utilized for growing timber and grazing cattle.

CLASSIFIED Advertisements

The rate for advertisements of this nature is only five cents per word for each insertion. You may count the number of words you have, multiply it by five, and you will have the cost of the advertisement for one insertion. Multiply this by the total number of insertions desired and you will have the total cost. This rate is so low that we cannot charge classified accounts, and would, therefore, appreciate a remittance with order. No advertisement accepted for less than 50 cents.

REAL ESTATE

WILL EXCHANGE West Texas cattle ranch for unimproved or improved land in Florida. What have you? Give price and full particulars. T. E. Bartlett, 3410 McKinley Ave., El Paso, Texas.

"BOOK OF TRUTH"

For planters of new groves
Is yours for the asking,
Write Today.

OCKLAWAHA NURSERIES INC.

"Pedigreed Citrus Trees" Florida

FOR SALE—Pineapple land in winterless Florida. \$15 an acre. Almont Ake, Venus, Fla.

WANT TO SELL HALF INTEREST IN FIFTEEN ACRE SATSUMA BEARING GROVE ON HIGHWAY NEAR PANAMA CITY. ROBT. LAMBERT, OWNER. FOUNTAIN, FLA.

SATSUMA BUDWOOD from Bearing Trees. Hills Fruit Farm, Panama City, Fla.

WANT TO hear from owner having farm for sale: give particulars and lowest price. John J. Black, Box 93, Chippewa Falls, Wisconsin.

WANTED—To hear from owner of land for sale. O. Hawley, Baldwin, Wis.

MISCELLANEOUS

FOR SALE—Dairy and stable manure, car lots. Link & Bagley, Box 464, Tampa, Fla.

WHITE WYANDOTT Cockrels, regal strain—the best in the country, direct from Martin pens. Utility and show birds \$6.00 each; also eggs for hatching \$5.00 per

15. W. A. King, Gen. Del., St. Petersburg, Fla.

HIGH BLOOD PRESSURE easily, inexpensively overcome, without drugs. Send address. Dr. J. B. Stokes, Mohawk, Fla.

WANTED

COMPLETE LINE OF CITRUS GROWERS' SUPPLIES

A well known reputable firm of national scope, marketing certain materials required by citrus growers, is extending its line of merchandise to cover complete requirements of its customers.

If you have something excellent to merchandise—fertilizer, orchard heaters, pest control material or equipment, or any similar product for wide distribution—I can tell you whom you should see.

Address: J. T. Pierson, 503 South Union Drive, Los Angeles, Calif.

BEGGARWEED SEED. Place your order for Beggarweed seed now and be assured of delivery. Write for special prices. Wm. G. Ranney, Box 297, Monticello, Fla.

PUREBRED PULLETS FOR SALE—White Leghorns and Anconas ready to ship. Barred Rocks and R. I. Reds shortly. Several hundred yearling White Leghorn hens now laying 70%. Write or wire for prices. C. A. Norman, Dr. 1440, Knoxville, Tenn.

LAREDO SOY BEANS. considered free from nematode, excellent for hay and soil improvement. Write the Baldwin County Seed Growers Association, Loxley, Alabama, for prices.

FARMER AGENTS: Make \$25.00 weekly selling Comet Sprayers. Profitable winter employment. You take orders. We deliver and collect. Commissions weekly. Established 35 years. Particulars free. Rusler Co., Box C-18, Johnstown, Ohio.

FOR SALE—All varieties bananas and citrus trees. D. A. Nigels, Palm Harbor, Fla.

RUNNER peanuts—Spanish peanuts Early speckled - Osceola - White Chinese and Bunch Velvet Beans. All varieties peas and Soybeans. Large or small lots. H. M. Franklin, Tennille, Georgia.

AVOCADOS - SEED — Grafted. Reliable bearers only. John B. Beach, West Palm Beach, Florida.

PLANT AVOCADOS in Redland Section. Dade County, where they thrive best. Best paying crop in United States. Send for prospectus. Brooks Properties, Realty Board Bldg., Miami.

BABY CHICKS: Send no money, shipped C. O. D., pay mail man when delivered. Leghorns \$14.00 per 100; reds, corplings, minorcas \$16.00; mixed \$13.00; live delivery, postpaid, Florida Baby Chickery, Lakeland, Florida.

Orders Inquiries



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Gives counts and prices on over 8,000 different lines of business. No matter what your business, in this book you will find the number of your prospective customers listed. Valuable information is also given as to how you can use the mails to secure orders and inquiries for your products or services.

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